

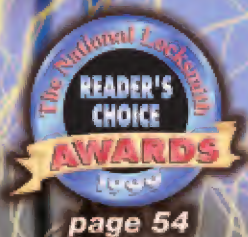
The National Locksmith®

June 1999
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CODES!
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page 120



ELECTROMAGNETIC LOCKS



On The Cover...



Electromagnetic locks and electric strikes have gained tremendous acceptance and design improvements over the last few years, offering more choices than ever before.

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COMMENTARY



TheNationalLocksmith.com A clean well lighted place

Aren't these giant new book stores great? They're open from early 'til late, they are clean and well lighted, and they even have a café inside. You can enjoy a hot cup of coffee while you page through the latest books and magazines.

Too bad such a place doesn't exist just for locksmiths... We could use a hangout, a clubhouse just for us. If I were going to build such a place I would make it convenient for you. I'd build a big, clean, well lighted place and fill it with information and resources that would help you every day in your job. I'd pack it full of other locksmiths so that whenever you drop by, you'll have brother and sister locksmiths to talk to. I'd keep locksmith books, software and manuals on a shelf so you could look them over whenever you want. And heck, I'd keep it open 24 hours a day so you can hang with us anytime. Finally, I'd build this locksmith club right in your backyard so you could join us anytime.

Sounds like a dream doesn't it? Well guess what...this is no dream. We built it. It's open now. It never closes. Our locksmith club is everything I wished for above with one exception. We didn't build it in your back yard. We built it in your bedroom, or your living room, or your shop...we built it wherever you have a computer. We built it on the internet.

TheNationalLocksmith.com is the location for your own personal locksmith club, and all you have to do is drop by to join. It's free. It never closes. And it's as close as your own computer.

In the web site we've created an online store where you can view virtually every training manual and book we publish. You can even read sample pages from many of the books. Now you can browse through a book before deciding to buy, and if you want to purchase, you can do so, on a secure server where it is safe to use your credit card. You've been hearing a lot about our code program, InstaCode.

Now you can download the InstaCode tour for free and let it show you all the latest features.

How many times have we all been stuck trying to find the one bit of information we need to complete a job? Help isn't far away anymore. 24 hours a day, 7 days a week you can ask for help and you can advise others in the locksmith forums we've created for you.

TheNationalLocksmith.com went live in this new format on April 12th. That same day, your friends around the world started to talk to each other about locksmithing, sharing information every day about the job. Want to know which national accounts pay fast and which pay slow? Need a part and don't know where to find it? It's all online now, so come join the party.

While you're checking out our site, take a visit over to Clearstar.com as well. It's another site I recommend as a fine place for locksmiths.

We'll be looking for you at TheNationalLocksmith.com. The party has already started, but it's never too late to join us. You just have to bring your own cup of coffee.



Marc Goldberg

**Have questions? Want free technical help?
Free Locksmith Forums!**

www.TheNationalLocksmith.com

Marc Goldberg
Publisher

Mango's Message

I recently purchased a new toy for myself that came with a manufacturer's lifetime warranty to the original purchaser if a failure in materials or workmanship should occur. In theory, I should never need to purchase this product again, because if it fails for any reason (other than user abuse) the manufacturer will replace it free of charge. That sure sounds great, and to be honest, the term "Lifetime Warranty" did influence my purchasing decision. I could have purchased another manufacturer's comparative product, which was comparable in function and design, however, the lifetime warranty swayed my decision.

Did I make the right choice? I don't really know. I can't say for sure that the product I purchased is better than the competitor's product. All I know is, the lifetime warranty instilled a sense of confidence that if I did have a problem at any time it will be resolved.

Lifetime warranties are a marketing tool that more companies are using to attract your business, which is what a lifetime warranty is; it's a marketing strategy. Market gurus know there are two strategies that will always net results: competitive pricing and extended warranties. One has to ask, however, what exactly is a lifetime warranty, and who's lifetime is the warranty based on? It sounds impressive, but is it ever really honored to the extent with which it is presented? What special criteria and conditions are exempt? And what good is a lifetime warranty if the company offering it goes bankrupt, or is sold or acquired by a larger conglomerate? These are questions that are seldom covered, or vaguely covered, in the lifetime warranty agreement.

There are few manufacturers' in the world that relish the idea of warranting its product(s) for a lifetime; it can turn into a logistic nightmare. It is a way to attract your attention and swing the pendulum in their direction, but even for those companies, who have total confidence in the

performance of their products, offering a lifetime warranty can be the kiss of death.

Remember the national service chain Rusty Jones? If you don't, it offered

vehicle rust proofing by spraying a tar like substance in door panels, quarter panels, undercarriage and exposed unpainted surfaces.



Lifetime Warranty

The service came with a lifetime warranty against rust on any vehicle it serviced. If a vehicle did rust it would repair or replace the rusted area at no charge. Where is this company now?

As it turned out, the rust proofing service did more harm than good, as those vehicles subjected to the procedure began to rust at an alarming rate. The tar like substance used in the process plugged the drain holes engineered into the vehicle, thus trapping water inside. The trapped condensation eventually caused corrosion as doors rusted from the inside out. It was a futile attempt to honor its lifetime warranty. Very few if any of these dealers still remain as most filed bankruptcy after huge losses. In this case a lifetime warranty (not to mention a poor product) was the demise of a national chain.

On the other hand, Sears & Roebuck Co. built the largest and oldest department store in the world on two premises: Customer Satisfaction Guarantee and Lifetime Warranties. The Sears commitment holds true to this day and still enjoys phenomenal success.

Recently, I received a call from the Securitron Magnalock Corp. to inform us they were about to make a major announcement unequaled in our industry. We were invited to participate in a telephone

Greg Mango
Editor





press conference of publishing companies that would include an announcement by Securitron's President and CEO, Bob Cook, followed by a question and answer session.

Over the years *The National Locksmith* has received numerous manufacturer/product notices that were to be of immeasurable importance to the industry. They were usually immeasurable, all right. So much so that there was nothing there. Needless to say we were a bit skeptical regarding the magnitude of Securitron's "major announcement." That is, until the conference took place.

Securitron's Lifetime Warranty Program

In a telephone press conference on April 22, 1999, Securitron President and CEO, Bob Cook, announced the following lifetime warranty program.

"Today, I am pleased to announce the introduction of a revolutionary new product support and customer service program that is unequalled in our industry. It's called MagnaCare™. MagnaCare™ is a lifetime warranty replacement program for any product Securitron manufactures. The product will be replaced for any reason, at any time, no questions asked. And when we say for any reason, we are including improper use or abuse by the customer. If, for example, a 12-volt product is plugged into 115 VAC and is burned out, MagnaCare™ will replace it free. If it's dropped on a concrete floor during installation, MagnaCare™ will replace it free."

With MagnaCare™, the customer contacts Securitron directly. He obtains an authorization number, and ships the product to our Sparks, Nevada factory at his or her expense. Once we receive the product, we will send out a replacement by next day air at no charge. If the customer cannot wait to return the product first, we will ship the replacement in advance, next day air, and bill their existing account or even their credit card if they don't have an account with us. Upon receipt of the advance replacement product, we will issue full credit, including the outbound shipping charges.

How is Securitron able to offer what this unprecedented warranty program? I can answer that on two levels.

First, we inventory all of our products we sell. This allows us to provide the fastest delivery times in the industry and at the same time allows us to make this next day commitment for the MagnaCare™ program.

Second, Securitron enjoys a very low product return ratio, which is a tribute to our high-quality engineering and production standards. That is why we are one of the only American ISO 9001 certified manufacturers in the electric locking industry. Simply put, less defects, less returns.

The MagnaCare™ program is a winner for everyone who buys or uses our quality products:

- *For the stocking distributor, who loses money every time they re-handle a product under warranty, Securitron now gets them out of the repair administration business.*
- *The installer now has a powerful tool to win customers based on lower product replacement costs, which results in higher profit margins using Securitron products.*
- *The architect, specifier or end-user, knows that they will never have to repurchase a Securitron product. This yields greater confidence in using these products to solve their security needs with a fixed overall cost over the life of the installation.*

The MagnaCare™ program is effective immediately, and is retroactive to all products purchased after January 1, 1999. We feel strongly that this program will revolutionize our segment of the industry and become another benchmark for all companies, security based or otherwise, to strive for."

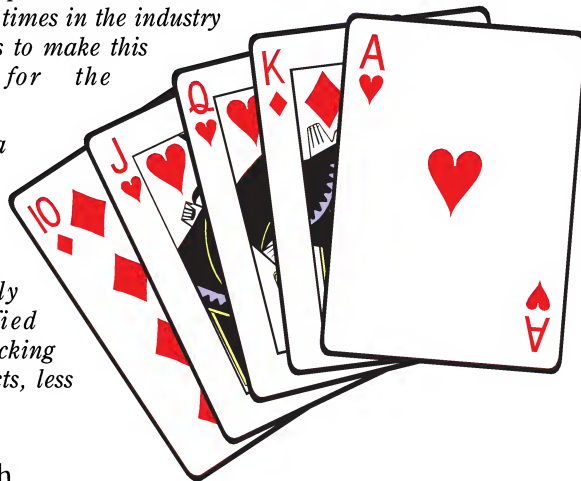
Wow! That's a pretty impressive and aggressive marketing campaign by Securitron. To replace any Securitron made product for any reason (including improper use or abuse by the customer or installer) at any time, no questions asked, is a very in your face posture. How can that not capture your attention and cause you to consider a Securitron product the next time you need an electromagnetic lock, exit device, entry device, exit switch, keypad, power source, timer, control panel or host of other access control devices?

What this tells the consumer is, Securitron has complete confidence in its products. What this tells Securitron's competitors is, we're out to get you. The real question now is, what effect will this have on those manufacturers with comparable products? When a major player like Securitron offers a lifetime warranty, it forces its competitors to reassess their policy and either follow suit or offer alternative options. If Ford Motor Co. offered a bumper-to-bumper lifetime warranty on every vehicle that it produced regardless of miles, General Motors and Chrysler would be forced to react. It would be corporate suicide not to.

This is a high stakes game that is not for the faint at heart. It's like a good poker game, someone will eventually call your hand and either you hold the winning cards, or you don't.

Securitron has drawn a line in the sand and is inadvertently flexing its muscle, thumping its chest and challenging anyone to a match.

It will be interesting to see what developments come next. **TNL**



Letters

The National Locksmith is interested in your view. We do reserve the right to edit for clarity and length.

Business Struggles

First of all, I am a subscriber to your magazine and I enjoy it very much. I just read Mango's Message "Uncle Locksmith Wants You" in the April issue and I have a few questions that I have been getting the run around with. (Please don't take it personal.)

I took a locksmithing course through NRI in Washington D.C. and received scores in the 90% range. To get an idea how much I would need to invest in the locksmith business to get started. I asked NRI what dollar amount a person would need to start a basic locksmith business? The answer I got was: *"It depends what branch of locksmithing I intend to get into!"*

A basic locksmith business to me would be; changing lock combinations, installing locks and deadbolts, opening vehicles and cutting basic simple keys. Isn't that a basic locksmith business? I guess they didn't have an answer. Anyway, to accomplish my goals, I'll tell you what I have done so far. I completed



the NRI locksmith course in April 1998 and just received my diploma in December 1998. In January 1999, I subscribed to your magazine and got some stationary and business cards made up like the one shown here. I sent for your "Flat Rate Manual" and "Security Solutions." I passed out cards all over the place and have been waiting for business. Here it is April 1999, and I haven't even had one call yet.

Next, I'm going to run an ad in the Pennsylvania yellow pages, a good size add of 2-1/2" x 3". It comes out in October 1999. This ad is going to cost \$47.00 a month, tacked on my telephone bill whether I get business or not, which brings me to what I do down in this part of Pennsylvania.

I have been a door to door salesperson, independent contractor for the last 11 years, plus other enterprises (I just happen to try). This is why I'm writing to you on motel paper. While staying at the motel I passed out my car opening cards just in case someone would lock their keys in their car.

I'm still hoping to get into the locksmithing business, but funds are limited. I buy tools and keys every month as my budget allows. If you have any comments that could help me out, that would be more than appreciated. I do have to apologize for my misspelled words and

writing. After all, I am not trying to be a writer, just a locksmith that wants to get into the lock repairing business with plenty of drive and enthusiasm to succeed.

Lester Howard
Pennsylvania

Editors Note: Lester, welcome to locksmithing. The questions you are asking and experiences you are encountering are ones that all new locksmiths have asked and faced in the past. You are not alone. Getting established can sometimes be a painful and arduous task, but it is not insurmountable. Remember the old adage: "We all crawl before we walk, and we walk before we run." You are about to take your first steps and it is expected that they will be a bit tentative and wobbly, not to mention the fact that you will most certainly fall a few times. Remain vigilant, persistent and optimistic and a ray of sunshine and accomplishment will eventually filter through.

You have made a good start with your subscription to this magazine as well as your investment in "Security Solutions." The Security Solutions marketing program you purchased includes two booklets on how to establish and market a locksmith business. Both are written by veteran locksmiths who started out just like you and are now operating successful businesses. I suggest you study it carefully and implement the suggested ideas. I would also encourage you to join us in the Locksmith Forums on our web site at: www.TheNationalLocksmith.com. There you can ask all the questions you want to thousands of locksmiths about how to start a business and make it grow. The number of responses you receive will astound and encourage you. You will also meet new friends from around the world whose interests parallel yours that would have otherwise not been possible.

On a minor critical note about your

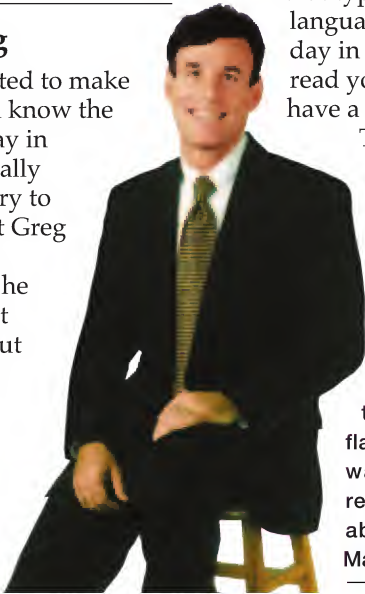
The National Locksmith
1533 Burgundy Parkway
Streamwood, IL 60107
Attn: Editor

business card, it does not clearly convey what you do or have to offer. Ask others what works for them and emulate that which has proven to be successful.

There is no doubt that you will experience your own trials and tribulations, but I still contend that locksmithing is a great trade to be in. Good luck. Greg Mango

Very Unflattering

Hi Marc, I just wanted to make a quick comment. You know the picture that you display in your magazine? It's really not very complimentary to yourself. If you look at Greg Mango's picture, how relaxed and confident he looks, and you got that funny look to you about how your arms are all squeezed like you're trying to cover up something or you're very self-conscious about your weight. You should probably



take another picture and present yourself a little better. The clothes, and the way you pose, it looks very uncomfortable. If you compare your picture with Greg Mango's, you can see how confident and relaxed and how open he looks. Just a little constructive criticism, as we deal in that type of thing with body language and stuff during the day in our business, but we do read your publication as we have a locksmith friend.

Thought we'd give you a call and let you know O.K.? Thanks; hope to see a new picture soon.

Phone Message

Editors Note: After Marc received that call, you can imagine how inflated my ego was after receiving those accolades and flattering remarks, however, I was quickly deflated after I received the following e-mail about two weeks later. Greg Mango

Get a Face Lift

No disrespect intended, and I hate to say this, but I think it is about time Greg Mango takes a new picture for *The National Locksmith* or changes his suit and tie. No reflection on Greg, but that suit should be able to stand up by now.

*John J.
Romagnano
E-Mail*



Editors Note: True self criticism is not only difficult, but will often reveal characteristics in one self which we would rather not know. After receiving the previous phone call and e-mail, Marc and I took a long critical look in the mirror and concluded that we really are a total mess. Marc immediately called Lord & Taylor's to have us fitted with new Armani and Versace suits. He then contacted the photographer to arrange a photo shoot, sparing no expense on backdrops and lighting. Our dramatic new look is being unveiled for the very first time right here. The company expenses incurred for the new \$1500 (each) Armani and Versace suits and photography shoot will be reflected in a minor subscription price increase. (Just kidding.)

Well, what do you think?

We are obviously having fun with the situation, however, we do appreciate, encourage and value all comments that our family of subscribers and members have to offer. It is encouraging to know that our subscribers are involved, affected and concerned with every aspect of this magazine. We also know that most criticism is given with good intent, which will only help strengthen our position and ultimately improve this publication. For that we are grateful. Greg Mango

P.S. I don't know about you, but I don't think Marc ever looked better! **TRL**

In Memory - Gerry Finch

The National Locksmith is deeply saddened to report that Gerry Finch died on April 19, 1999. Gerry lost his battle against throat cancer, which he had fought against for some time. Gerry was a contributing writer for this magazine and a strong advocate for locksmith education and professionalism, contributing both for almost a lifetime. He will be missed by all of us at *The National Locksmith* as well as many within the industry.



while with the Technical Intelligence Center.

Gerry is the recipient of the California Locksmith Association's Golden Key award, Associated Locksmiths of America President's award, the Lee Rognon award, the Gerald Connelly Pioneer award and the Philadelphia award.

He was a charter member of the ALOA sponsored national task group for certified training programs and master keying study group. Gerry was a life long locksmith retired from the United States Air Force in 1964. At the time of his retirement he was on detached duty to the U.S. Army Technical Intelligence Center at Fort Holabird, Baltimore, Maryland where he was an instructor in the defense against methods of entry (D.A.M.E.) course.

After retirement he was a technical consultant with the Hori Lock Company in Tokyo, Japan. He was general manager of keying and security for the then Weiser/Falcon Lock Co. and product design manager with Lab Security where he designed several lock servicing tools and the Lab stainless steel lock picks.

Gerry retired again in 1996 after 60 plus years in the locksmith industry. He resided in sunny California where he is survived by his wife and three children.

Gerry was a locksmith with over 60 years experience and taught lock picking classes for 40 years to national and state locksmith associations throughout the United States, as well as security personnel from industry and government. He has also taught classes internationally, including Alaska, Hawaii, Japan and Ireland. The "Manual of Lock Picking" by Gerry Finch is based on his many years of experience teaching thousands of locksmiths and security personal and on the personal methods he devised for teaching the subject

Security Café

**DROP IN FOR
TOOLS, TECHNOLOGY
& EQUIPMENT**

Fast Facts™

Sieveking Products Co. has introduced the 1999 second edition of Fast Facts, the encyclopedic index of auto key making facts. Fast Facts lists over 2500 car models (1960-1999), with 331 key plates and 662 key illustrations. The second edition is available in the original pocket size and the new 6"x11" desk size. The desk size is wire bound to lie flat.

New Fast Facts has added ITL numbers, Pack-A-Punch information, HPC CodeMax numbers, Aero & Baxter Try-out Keys, and Jet key numbers. Expanded "Helps" section includes all the latest "Transponders," the newest key numbers, and step by step transponder originate and duplicate methods.

Taymor Door Hardware



Taymor has a large selection of door hardware; Push Plates, Kickplate, Pull Handles, Door Stops, Risers, Flush Bolts, Chain Checks, Door Viewers, Door Knockers, Hat and Coat Hooks, Mailboxes, Brass Numbers and Letters, in addition to their extensive commercial hardware lines.



Threadlockers Retaining Compound

Threadlocker 222 is a low strength purple compound that is removable with hand tools and is best for small fasteners 1/4" or smaller. It's ideal for long engagement length fasteners, set screws, calibration and adjustment screws.



Threadlocker 242 is a medium strength blue compound for general purpose fastening that is removable with hand tools. It is good for all nut and bolt applications, especially 1/4" or larger fasteners.

Threadlocker 290 is formulated especially for small to medium size pre-assembled fasteners. The very low viscosity (12cP) green liquid penetrates by capillary action. It is also used to seal welds.

Retaining Compound 609 augments the strength of press-fitted assemblies and slip fits with up to .005" diametrical clearance. It's a



Roto Zip's 3D Zip™ Bit

Roto Zip Tool Corporation 3D Zip™ Bit drills, mills, counter-sinks, and cuts woods, and wood products, in virtually any direction—even around

corners. Used with 3/8" and 1/2" drills, this single bit replaces forstner, spade, and twist drill bits. The oversized crown with six cutting edges acts as a milling tool to recess a box or a lock, or cut grooves and channels for cables and tubing.

low viscosity (125cP) liquid which fixtures in 10 minutes at room temperature. Shear strength: 3000 psi at full cure of 24 hours.

Framon on Disk

Framon Manufacturing Company is now offering their Depth & Space Manual on disk. The program contains all of the information contained in the paper version, and allows the user to input new information as it becomes available. Progressive spacings, spacing block numbers, and comments field allows the user to input notes on any chart.

DoorKing's 1802

DoorKing's model 1802 standard telephone entry system combines many features typically found only in higher priced telephone entry systems into a small compact enclosure.

The new model 1802 features a re-designed faceplate that now incorporates lighting to

illuminate the keypad during the night and a built-in LCD programming display. It also has a built-in clock/calendar that can be programmed to automatically open a door or gate at predetermined times, or to set time zones for entry codes.

A unique feature of the 1802 is the ability for it to store "Flash Codes" which is an entry code that is valid on a single day only, then automatically deactivates itself. The 1802 uses full



SECURITY CAFÉ

duplex circuitry for crisp and clear communications, and can store up to 10 alternate area codes making this unit compatible for areas where 10-digit dialing has been implemented. The 1802 is also fully Y2K compliant.

New Key-Bak Super 48 Retractor

Key-Bak announced an improved version of the popular device that incorporates several new design and performance features.

Designated the Key-Bak Super 48, the new model has a maximum reach of 48-in., twice the length of the original Key-Baks chain. And instead of a chain, the Key-Bak Super 48 employs a seven strand stainless steel cable encased in a protective nylon jacket. Rated at 95lb. Breaking strength, the cable has a much greater strength-to-weight ratio than comparable chain.

The Key-Bak Super 48 has a distinctively contoured corrosion-proof case, fabricated of industrial polycarbonate alloy. An exclusive Key-Bak Super 48 feature is a generous 90° slit in the lower quadrant of the case that permits the cable to wind directly on and off the internal reel in a tangential direction.

Master Lock's Door Key Compatible Padlocks

With Door Key Compatible Pro Series padlocks, the same key that opens your facility's door locks can also open your high security padlocks.

Master Lock's Door Key Compatible padlocks are

compatible with the 26 most popular commercial door keyways including those from Schlage, Kwikset, Weiser, Arrow and Yale.

Each style of padlock available can be matched to the needs of the specific security environment. Master Lock supplies the base model padlocks and cylinders in response to the end user's desired keying options. The padlocks are received complete and ready to be operated by the door key already used.

Master Lock offers a broad line of Door Key Compatible padlocks including High Security Pro Series, designed to protect extremely valuable



equipment, Weather Tough padlocks for harsh outdoor applications such as trucks and gates and solid brass Pro Series locks, which are ideal for corrosive commercial conditions.

Dynamic Locksmith Plus Software

This powerful software will increase your cash flow with a



complete billing system, vehicle expenses and posting file with collection screen and phone log. Vendors with account history, inventory that may be assigned to trucks and deleted from stock. Print instant contracts or quotes, customer history, banking, check writing and taxes. Integrated dispatch and extensive search keys in every screen, help behind every field plus it will fix and repair it's own data files.

Long Range Wireless Annunciator

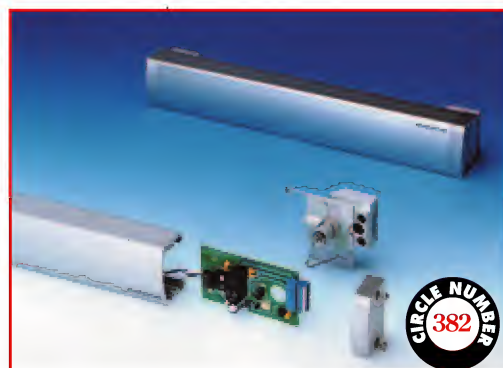
Optex's Long



Wireless 1000 Annunciator System reliably alerts users to the approach of visitors, provides outdoor perimeter protection and other light security applications. Both the PIR transmitter (TD-10U) and the push button (TS-10U) transmitter are fully weatherproof for indoor or outdoor use. The receiver (RC-10U) has three tones to identify the transmitter sending the signal, a latching alarm zone, and a 1 Amp form C relay which is ideal for activating door strikes, lights, CCTV, and countless other uses. Winner of SIA's Security Industry's Finest Award at ISC West 1999.

6450 Exit Sensor Bar

DynaLock Corp. introduces



the non-latching UL listed 6450 Exit Sensor Bar designed to specifically release electric locks when activated by anything including a hand, clothes, cart or ADA devices.

Reliable optical sensors eliminate complicated tune-in and costly call backs. All metal construction, including end caps, resists impact and fire, and ensures compatibility with architectural finishes.

High reliability, redundant sensors for Life Safety and rugged construction provide savings in installation and maintenance costs.

Mortise Lock Template Guides

Major Manufacturing has introduced more mortise lock template guides. All guides are machined from 1/2" aluminum and are equipped with hardened steel drill



bushings at all locations. Models are now available for Arrow, Best, Corbin/Russwin, Falcon, Marks, Sargent and Schlage with many more in development. Requires the HIT-45 modular clamp and ML1 positioning fixture.

TNL

SECURITRON Re-Invents THE ELECTRIC STRIKE!

by Robert C. Cook

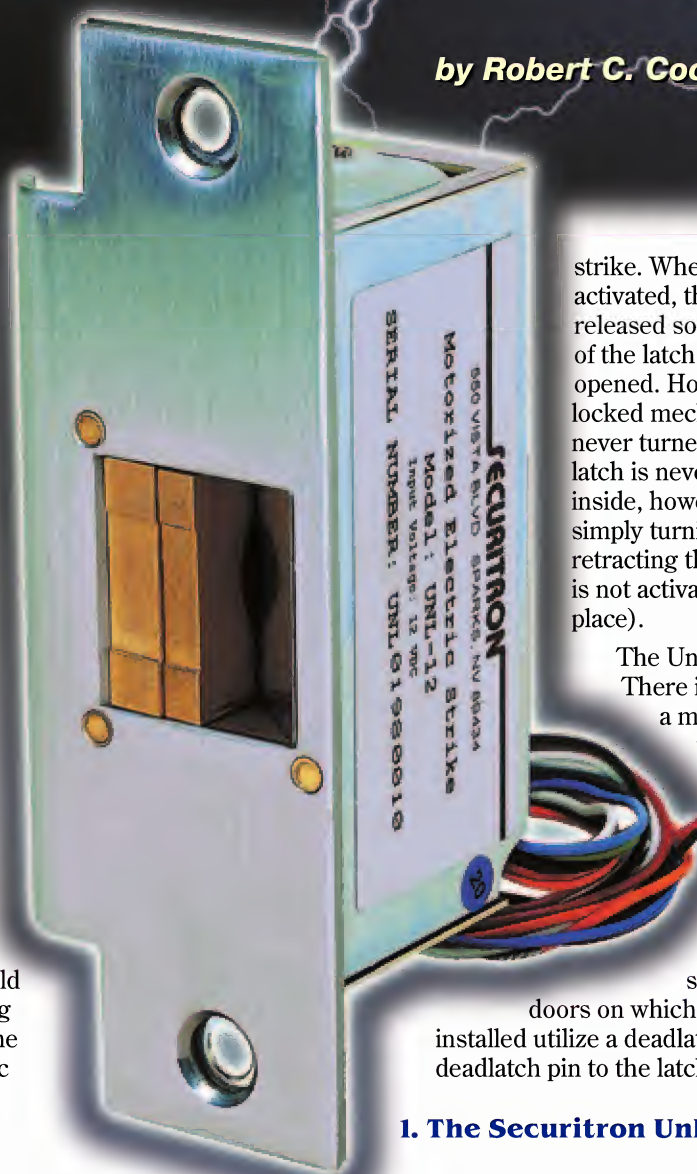
It's not often that the term "revolutionary" honestly applies to a new product, but Securitron has stormed the barricades with a new invention called "The UnLatch™." (See *photograph 1.*) The UnLatch is a completely new type of electric strike, which innovates into a field, which has been technically stagnant for 50 years.

Before explaining the UnLatch, let's review electric strikes in general. They are sometimes inaccurately referred to as electric locking devices when, in fact, they are door latch releasing devices. The security effect comes from the fact that the latch is mechanically locked from the outside: a person wishing to enter is unable to turn the door knob or door lever. When a person pulls on the door in an attempt to open it, the door is held secure by the latch hitting a pivoting plate called the "keeper" which is the crucial component within an electric

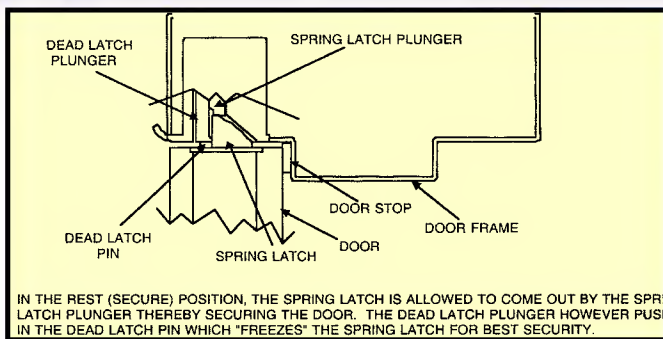
strike. When the electric strike is activated, the keeper is electrically released so that it pivots out of the way of the latch and the door may be opened. However, the door remains locked mechanically. The door knob is never turned (from the outside) and the latch is never retracted. From the inside, however, free exit is possible by simply turning the doorknob and retracting the latch (the electric strike is not activated and the keeper stays in place).

The UnLatch works differently.

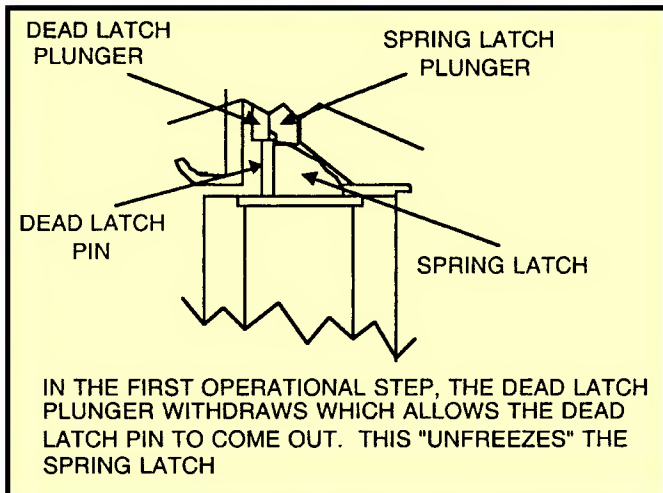
There is no keeper. Instead, a motor driven plunger pushes the latch back into the lock body and this allows the door to be pulled open, without the necessity of turning the door knob. While this describes the UnLatch's operation when used with a simple spring latch, most American doors on which electronic security is to be installed utilize a deadlatch. A deadlatch adds a deadlatch pin to the latch itself which,



1. The Securitron UnLatch.



A. The UnLatch has a second plunger to depresses the deadlatch pin holding it in.



B. The deadlatch pin plunger first withdraws allowing the deadlatch pin to come out.

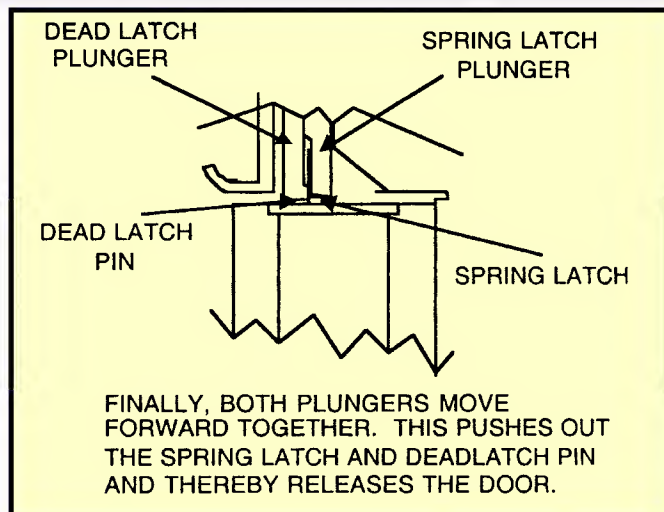
when depressed, prevents the latch from being pushed in. This provides additional security in a conventional mechanical latch installation. A person cannot, for example, slide a credit card against the beveled surface of the spring latch, thereby opening it. As long as the deadlatch pin is pushed in, the latch is internally mechanically blocked. It will, of course, retract when the door knob is turned from the inside.

To deal with the deadlatch function, the UnLatch has a second plunger, which, in the secure condition, depresses the deadlatch pin holding it in. (See illustration A.) When the UnLatch is activated, the deadlatch pin plunger first withdraws allowing the deadlatch pin to come out, (see illustration B) and then both plungers push in the latch and deadlatch pin so as to release the door. (See illustration C.) This is a radically different type of operation and Securitron expects to protect it internationally with several patents, the first of which has already been granted.

The following sequential drawings also illustrate the operation of the UnLatch by showing a cross section view. (See illustration D.)



D. These sequential drawings illustrate the operation of the UnLatch.



C. Both plungers push in the latch and deadlatch pin so as to release the door.

Securitron's invention is certainly different, now let's see what makes it better. First, it is much easier to install.

The installation of any electric strike can be divided into two areas: mechanical and electrical. The mechanical portion of the installation is preparing the door frame to receive the electric strike, which is a carpentry/routing operation. The electrical part is simply running the wires up through the door frame and connecting them to the other elements of the door control system.

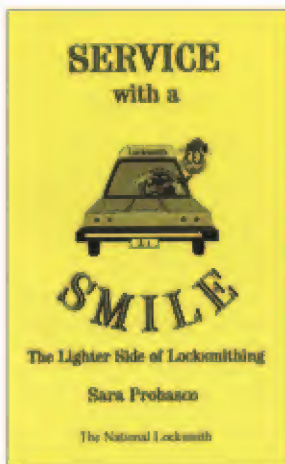
The electrical portion of an UnLatch installation is identical to a conventional electric strike installation, but the mechanical portion is sharply different. (See illustration E.)

Mechanical installation of a conventional electric strike requires making a complex shape cutout into the door frame. This cutout allows the strike keeper to pivot away so that the latch can move through the door frame space without retracting. This work requires special tools and skill. There is always the risk when cutting into a door frame that the work will be done poorly or the end user will see it as unacceptable work and demand replacement of the complete door frame... a very expensive proposition.

The design of the UnLatch completely eliminates the step of mechanical installation. The standard strike plate on the door frame is removed by two screws and the UnLatch screws into its place. The UnLatch is mechanically identical with standard ANSI 4-7/8" North American door frame preparation. (See illustration F.) The reason why this is possible is that the design of the UnLatch causes retraction of the latch (the latch is pushed in by the motor driven UnLatch plungers). This replicates the function of turning the door knob. Thus the UnLatch can fit into the same (standard) space.

The same characteristic of the UnLatch that allows it to be installed without any mechanical alteration of the door

Service with a Smile

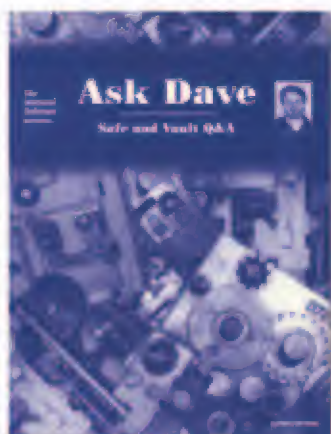


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#AD - 1

produces an installation wherein the fact that an electric strike has been installed on the door, is "undetectable." The door frame modification that occurs with a conventional electric strike is highly evident and is considered unattractive by architects who specify electrified hardware. Of course, it's not only the architect who appreciates a fully concealed and highly attractive installation. The final customer does too, and there's a security advantage in a concealed installation. An intruder doesn't know what he's up against.

Another security advantage is that the UnLatch always maintains the deadlatch function so that the door can't be opened with a credit card. For instance, conventional electric strikes can be used with deadlatches, but the deadlatch function is nearly always lost owing to physical tolerance issues between the deadlatch pin and the opening in the electric strike mechanism. This is sometimes called a "dirty little secret." Conventional electric strike manufacturers don't disclose the loss of the deadlatch function in their product literature, but any locksmith will testify that it is difficult to reliably maintain the deadlatching function in a conventional electric strike installation. Indeed, some locksmiths go so far as to replace deadlatches with less expensive and less secure spring latches because they will at least work reliably with the conventional electric strike.

Yet another advantage for the UnLatch is cyclic operating life. Electric strikes range between roughly \$60 to \$400. This enormous range has nothing to do with any difference in security. Security comes entirely from the door latch and that does not change. The difference has mainly to do with operating life. Electric strikes are prone to failure when the door receives aggressive use. Every time the door is "rattled" the latch is banging against the keeper and it is the keeper that must be electrically released to pivot out of the way as the electric strike operates. The crucial element of the conventional electric strike is the same component that receives mechanical abuse.

The UnLatch is quite different. Rattling of the door will cause the latch to bang into the deadlatch plunger, which is a solid piece of metal resting against a stainless steel frame element. The motor driven cam mechanism is withdrawn when the UnLatch is in the secure position. Therefore, the UnLatch should be extraordinarily resistant to abusive operation. Any locksmith will again testify that the operating life of inexpensive electric strikes is often measured in months. The operating life of the UnLatch is a function of the cyclic life of its motor which is between 200,000 and 300,000 cycles which, in an installation where the door is used 100 times a day, yields a calculated operating life of 10 to 15 years.

The UnLatch also releases under pressure. By contrast, if at the time a conventional electric strike is activated, the person attempting to enter is pulling on the door, the



E. The electrical portion of an UnLatch installation is identical to a conventional electric strike.

door will not release. The person will hear a buzzing sound and will, hopefully, let go of the door and pull it a second time to gain entry. This is a characteristic of nearly all electric strikes. When pressure is put on the keeper, the control solenoid lacks the torque to release the keeper. This is not a serious problem, but it is an annoyance. The UnLatch, by contrast, uses a powerful motor to push the latch into release. Tests have shown that this functions reliably with a pre-load of up to 30 pounds. This makes use

of the UnLatch smoother for the array of people who need to enter a secured door.

Finally, the UnLatch includes as a standard feature, latch status detection. It operates an internal relay whenever the door is in the secure position. This is available only as an option with conventional electric strikes; there's only one model of the UnLatch and that certainly makes the selection process easy. The installer has only to verify he's dealing with a cylindrical latch or deadlatch and the UnLatch will work.

To summarize the revolution:

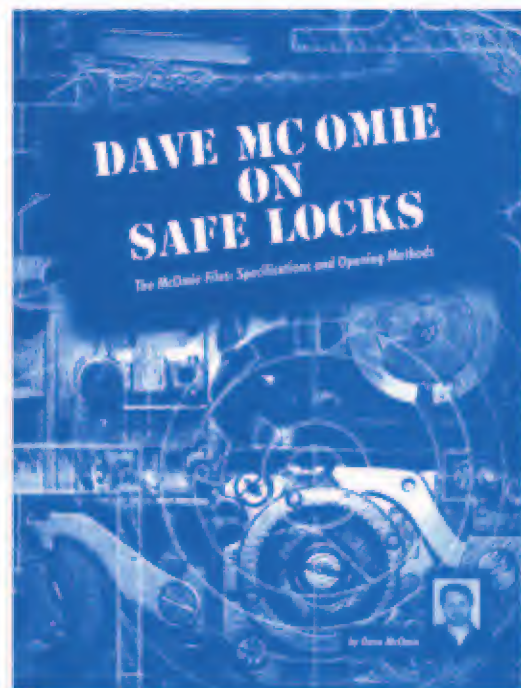
- The UnLatch requires no frame cutting or any type of mechanical installation effort or skill.
- It yields a fully concealed installation for optimum esthetics and security.
- It maintains the deadlatch function, again maximizing security.
- It shrugs off door abuse and delivers a really extended operating life.
- It opens even when pre-loaded.
- Latch status sensing is standard.

If you're impressed reading about the UnLatch, wait until you have one working.

For more information on the UnLatch call: 800-624-5625; Fax: (702) 355-5636; E-mail: INFO@SECURITRON.COM; Web: www.securitron.com. Circle #262 on Rapid Reply Card.

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Dave McOmie on Safe Locks



Almost 300 pages of information, photographs and illustrations give you every scrap of information about a huge variety of safe locks.

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#DMSL - 1

ELECTROMAGNETIC Lock Suppliers

ACSI 1500 Electronic Lock

Architectural Control Systems, Inc. (ACSI) Series 1500 Electric Lock modification is now UL listed for the Schlage D94 Vandlgard, Corbin Russwin 3300, Yale 5400 and Falcon cylindrical locks. The locks are available in Fail-Safe or Fail-Secure control. Voltages available are 24V AC/DC and 12V AC/DC.

The ACSI design allows Electric Lock/Unlock while maintaining the free-wheeling feature of cylindrical locks.

Other ACSI UL listed electrified cylindrical locks include the Arrow H12, Corbin Russwin 3400, Sargent 10 Line and Schlage D80.

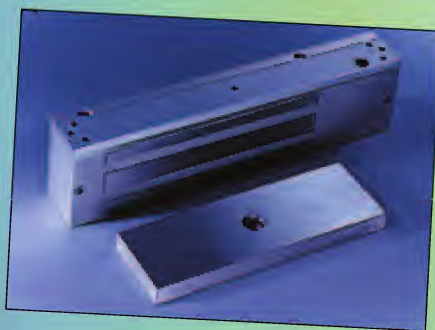


For more information contact:
Architectural Control Systems
10666 Gateway Blvd.
St. Louis, MO 63132
Phone: 800-753-5558 or
(314) 432-5588
Fax: (314) 432-2090
Circle #361 on Rapid Reply.

Dorma Electromagnetic Access Control

The Dorma Group has introduced a line of electronic access control hardware to complement the company's
22 • The National Locksmith

full range of door controls and exit devices. The line features electromagnetic locks, shear locks, delayed egress locks, power supplies, electric strikes, keypads, switches and other accessories.



For more information contact:
Dorma Door Controls
Dorma Dr., Drawer A.C.
Reamstown, PA 17567-0411
Phone: 800-523-8483 or
(717) 336-3881
Fax: 800-274-9724
Web: www.dorma-usa.com
Circle #362 on Rapid Reply.

DynaLock Delay Egress System

The DynaLock 3101 Delay egress system is an ideal way to add security to emergency exit doors. Delayed egress is used to discourage "back door" theft and the casual use of remote exit doors. It is recommended for use on perimeter doors in such areas as cafeterias, gymnasiums, libraries, commissaries and co-op stores. Consisting of an electromagnetic lock and mating armature the 3101 is easily installed and virtually maintenance free.

For more information contact:

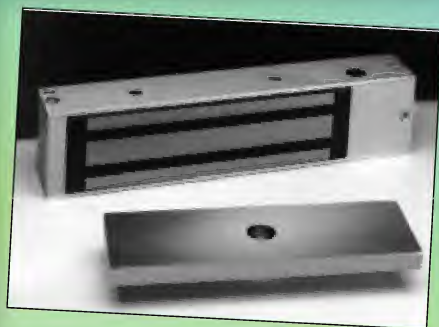
Dynalock Corp.
705 Emmett St
P.O. Box 9470
Forestville, CT 06011-9470
Phone: (860) 582-4761
Fax: (860) 585-0338
E-mail: dynalockcorp@snet.net
Web: www.Dynalock.com
Circle #363 on Rapid Reply.

Locknetics 370 Series

Locknetics Security Engineering has introduced the 370 Series electromagnetic locks. The 370 Series is a complete family of surface mounted high security locks that are fully approved under ANSI Grade 1 and BHMA standards. 370 Series locks are also UL listed as auxiliary locks for burglary resistance as well as for 3-hour fire-rated openings. Yet, the 370 Series is priced to compete with products that do not meet these standards.

The 370 provides 1500 lbs. of direct holding force for single or pairs of doors. These electromagnetic locks are also designed to interface with electronic access control systems, such as Locknetics' keypad and card reader systems and controllers, automatic door operators, and fire or other hazard sensing systems. The locks feature a fail-safe design with no moving parts.

Voltage is field-selectable for 12 or 24 VDC operation. The 370 has a low current draw of 0.6 A @ 12VDC and 0.35A @ 24VDC. A built-in voltage spike suppressor and 2' wire lead are standard, as is a universal-mounting bracket for simplified installation. Options include a Magnetic Bond Sensor, which detects whether an efficient bond has occurred between the armature and the lock face.



For more information contact:
Locknetics Security Engineering
575 Birch Street
Forestville, Connecticut 06010
Phone: (860) 584-9158
Fax: (860) 584-2136
E-mail: support@locknetics.com
Web: www.locknetics.com
Circle #364 on Rapid Reply.

Rofu's Innovation in Magnet Design

Rofu's new patented electro magnetic locks eliminate the need for any physical conversion of the magnet's wiring for power level match up. The patented feature allows the magnet to accept any DC Voltage between 10 VDC and 60 VDC while maintaining a low current draw of only 450mA.

Design features include zero residual magnetism, installer friendly mounting system, compact magnet dimension and a broad operating temperature range from -30F to 150F.

The magnets meet all US and European Listing Standards and are manufactured in Switzerland to Rofu's High Quality standards and carry a 5-year warranty against defects in material or workmanship.



For more information contact:
Rofu International Corp.
2004-B 48th Ave., Ct. E
Tacoma, WA 98424
Phone: 800-255-7638 or
(253) 922-1828
Fax: (253) 922-1728
Web: www.rofu.com
Circle #364 on Rapid Reply.

Rutherford Controls MicroMag

These uniquely small magnets offer a powerful bond of 300-lbs. holding force and are utilized mainly in limited space applications. Suggested uses include

cash drawers, machinery access hatches, smoke tower windows and fire hose cabinets. They are dual voltage 12/24 VDC and are electroplated to protect against rust.

Additional features such as a 10-year warranty, low energy consumption and MOV surge protection make RCI's MicroMags, the magnet to use for small enclosures. Mortise-mounted model 8365 is also used for sliding doors, while surface-mount model 8375



is for outswinging doors.

For more information contact:
Rutherford Controls
2697 International Parkway, Building 3-122
Virginia Beach, Virginia 23452
Phone: 800-899-5625 or (757) 427-1230

Fax (757) 427-9549
E-mail: sales@rutherfordUSA.com
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#AD - 1

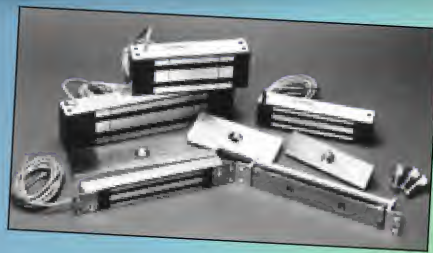
Securitron's Smart Technology

Securitron is introducing its "Smart" technology to its Model 34, Model 62, Model 82SC and Sam Series of locks. The "Smart" technology automatically detects 12 or 24 VDC and draws the correct amount of current for that voltage without the worry of setting switched, jumpers or using the correct set of wires.

In addition to automatic voltage sensing, the "Smart" technology adds the improved "SC" version of Senstat, Securitron's lock status sensing. Senstat allows interfacing with access control systems indicating not only a door is closed but secure.

The patented Senstat option (standard with the Model 82SC) provides a SPDT output, which changes states, if the lock is not secure. The improved Senstat reports loss of voltage or if the strike plate is not making complete contact with the magnet. Unlike other sensing technologies, Securitron's Senstat is not subject to falsing due to changes in temperature.

*For more information contact:
Securitron Magnalock Corp.
550 Vista Blvd*



*Sparks, NV 89434-6632
Phone: 800-624-5625 or
(702) 355-5623
Fax: (702) 355-5636
E-mail: info@securitron.com
Web: www.securitron.com
Circle #366 on Rapid Reply.*

Von Duprin Max Hold®

Von Duprin's Max Hold® Series 4000 electromagnetic lock provides a direct holding force of 1800 pounds in a package that combines a broad range of aesthetic and mechanical advantages. It is the only magnetic lock available with UL listings for burglary resistance, releasing device and auxiliary lock for fire doors.

The direct hold lock incorporates dual-coil technology to allow easy field configuration with a simple plug-in option on the internal circuit board to select 12- or 24 volt operation. A unique patented dovetail construction eliminates external mounting screws for better security and

appearance while also extending service life and simplifying assembly. The dovetail design distributes the load evenly over the entire length of the coil assembly, which eliminate fatigue points.

Installation is simplified by use of a backing plate that includes slotted mounting holes, which eliminates shimming and ensures accurate alignment. After mounting the backing plate through these holes and establishing correct alignment, additional mounting screws are installed. The magnet is then mounted to the matching dovetailed backing plate, completely concealing the screws.

The self-aligning armature ensures that the magnet and armature are held in positive alignment for maximum holding force and security. Its "floating" design allows the magnet to completely contact the armature face, regardless of door alignment.

*For more information contact:
Von Duprin
2720 Toby Drive
Indianapolis, IN 46206
Phone: 800-999-0408 or
(317) 897-9944
Fax: (317) 899-9302
Web: www.vonduprin.com
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15 Minute Safe Opening

This book deals exclusively with round head lift out doors. Shows five ways to open a Major; three ways to find the Dog Pin on a Major; four ways to open a Star; four ways to open a LaGuard style round head.

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#JJ - 1



BHD Hardware *from Britain*

by Billy B. Edwards, Jr.

find the rim lockset with a turn knob and bolt pull. (See photograph 3.) In the photograph the bolt is in the fully extended deadlocked position. One turn of the knob retracts the bolt to the latch position, from which you can use the knob or the bolt pull to retract the latch. (See photograph 4.) This lock has been approved for British Standard 3621, which is a standard for physical resistance.

From examination of the lock and watching the accompaniment video, that standard must be a tough one.

When the bolt is fully retracted, it is retained by an internal mechanism until the button on the top is depressed. (See photograph 5.) When the button has been depressed, the bolt is extended to the latch position and will automatically lock when the door is closed. The latch pull itself is available in different configurations and easily replaced if you need a different grip for handicapped use.

For a look at the works of this lock, remove the small knurled knob under the turn knob and using the hole on the edge, remove the mounting screw for the DIN profile cylinder. Wiggle the knob on the cylinder to align the cam and remove it as shown. (See photograph 6.) To remove the cover, first pull on the



1. A British company called BHD Group offers a couple of new products to the market.

2. The outside escutcheon, which contains a DIN profile cylinder.



From time to time you will run into a lock you haven't seen before. Usually the lock has been supplied as OEM equipment and then imported into the U.S. Other times the foreign lock company has just set up distribution of their products in the U.S. That will probably be the case with the locks in this article. A British company called BHD Group is preparing to find U.S. distribution for a couple of new products they have on the market. (See photograph 1.)

Lock Number One

The first lock is a rim mounted interlocking bolt device that is a latch as well as a deadbolt. On the outside trim you can see an escutcheon, which contains a DIN profile cylinder. (See photograph 2.) On the inside you will



3. On the inside is a rim lockset with a turn knob and bolt pull.



4. One turn of the knob retracts the bolt to the latch position.



5. When the bolt is fully retracted, it is retained by an internal mechanism until the button is depressed.



6. Wiggle the knob on the cylinder to align the cam and remove it as shown.

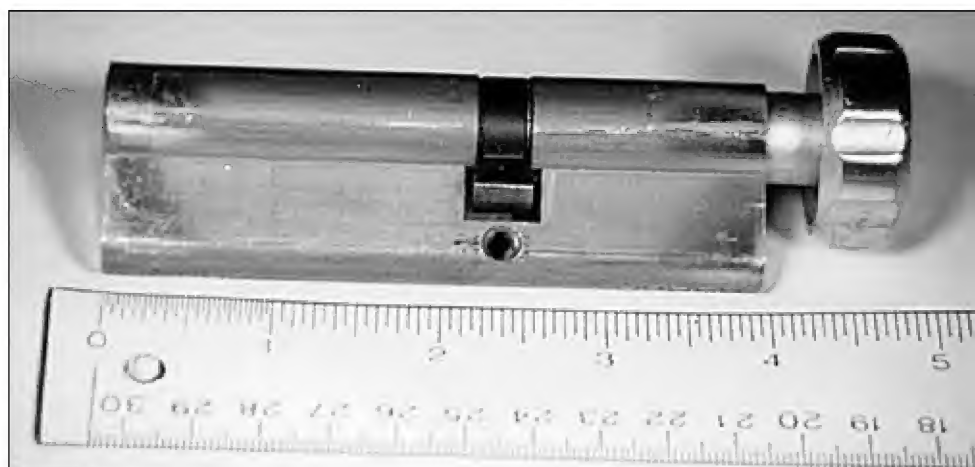
latch pull while pressing the button on top of the case and pull the case off.

The DIN profile cylinder extends 2-3/8" toward the front and 1-5/8" toward the inside and will most likely be a special order item if you don't want to use the cylinder supplied with the lock. (See photograph 7.) With the cover removed, you can see that the lock is made of laminated steel plates through bolted to the escutcheon for strength. (See photograph 8.)

The lock I have is a left-handed version; right hand models are available. The manufacturer indicates that there will also be a reversible version of this 1-1/2" backset lock available. There are also shims available, which fit under the escutcheon to compensate for different door thickness.

The 'latchback' bolt retainer doesn't rely on gravity to operate and I found that you could mount the left-hand version upside-down on a right hand door if in a pinch and it will function correctly. The strike is an interlocking one, and is available with versions that

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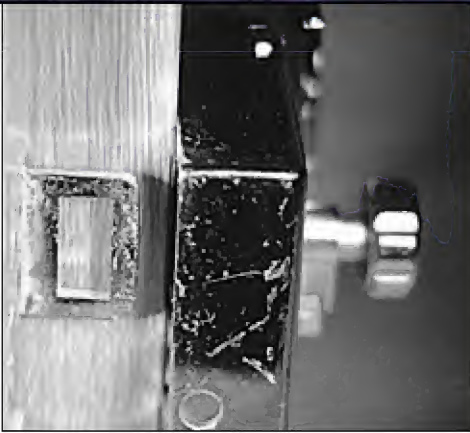


7. This profile cylinder will most likely be a special order item.



8. With the cover removed, you can see that the lock is made of laminated steel plates.

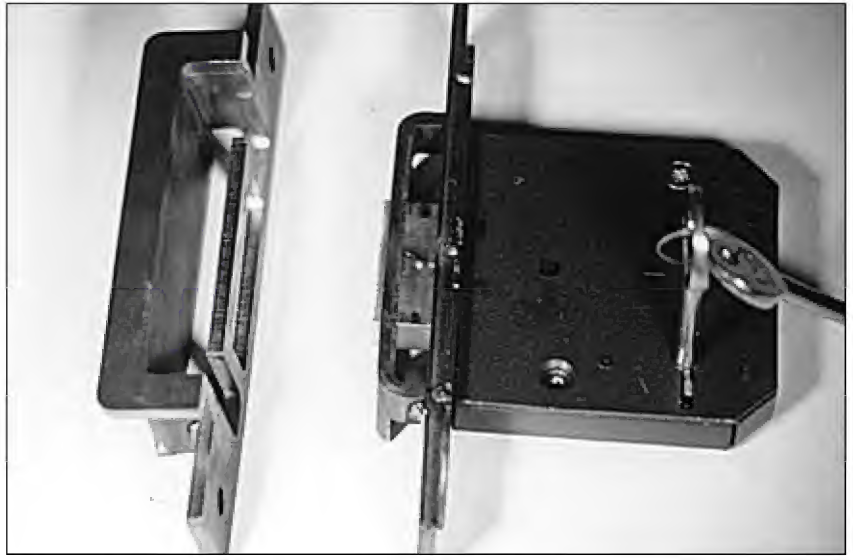
9. The strike is an interlocking one.



10. A jamb reinforcement plate can be through bolted to the jamb for extra strength.



11. An interlocking 'L' shaped bracket has been added to the face of the lock.



12. The lock and strike interlock.



13. The internal mechanism of the mortise lock.

use four or seven jamb mounting screws. (See photograph 9.) There is also an optional jamb reinforcement plate, which can be through bolted to the jamb for extra strength if needed. (See photograph 10.)

Lock Number Two

The second lock is less likely to be seen in the U.S. since it is a full mortise lever lock, but the interlocking strike was interesting and is a good option for some

enterprising lock manufacturer of the U.S. type mortise lock. As you can see in photograph 11, an 'L' shaped bracket has been added to the face of the lock and interlocks with the modified strike. (See photograph 12.) When extended, the bolt unites both parts making for a much more secure installation which can help prevent prying and kicking to gain entry.

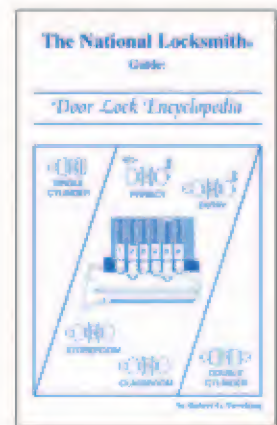
Photograph 13, shows the internal mechanism of the mortise lock.

The European market has some very interesting security hardware products and unique designs. Their level of security is much greater than ours and I believe U.S. manufacturers can learn much from their designs.

If you would like further information regarding these locks or other products the BHD Group offers, you can contact them easiest via their web site at: <http://www.bhdgroup.co.uk>, write to them at BHD Group, FREEPOST MID14088, Aldridge, Wasall, West Midlands, UK WS9 8BR, or circle 263 on Rapid Reply.

TNL

Door Lock Encyclopedia



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#DLE

The 1997 Nissan 200SX

by Michael Hyde

Part 2

This month we conclude our two part series covering the door lock and trunk lock

DOOR LOCK SERVICING



On this model, the door lock cylinder is not part of the outside handle assembly.



A view of the inside door panel, which must be removed.



Remove the Phillips head screw in the door pull cavity.



Do not remove the screw in the center of the inside door release. There is a trim ring that snaps on top of the release housing.



The trim ring being removed.

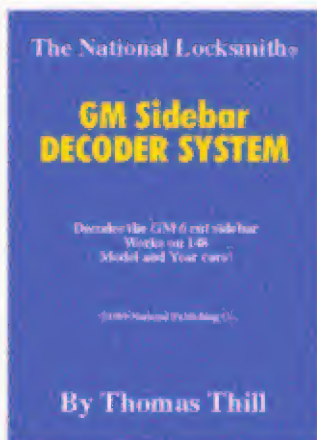


Next, There are two fasteners on the front edge of the panel that need to be removed.

There is also two fasteners on the rear edge of the panel that need to be removed.



There are four Phillips head screws on the bottom of the panel that must be removed.



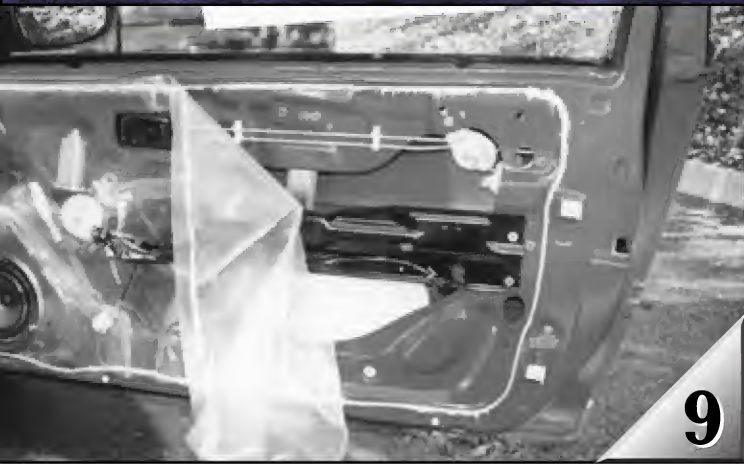
GM Sidebar Lock Decoder System

Tom Thill, the author of a new book, has invented an amazing new way to make keys for six cut GM Sidebar Locks.

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#TT - 1



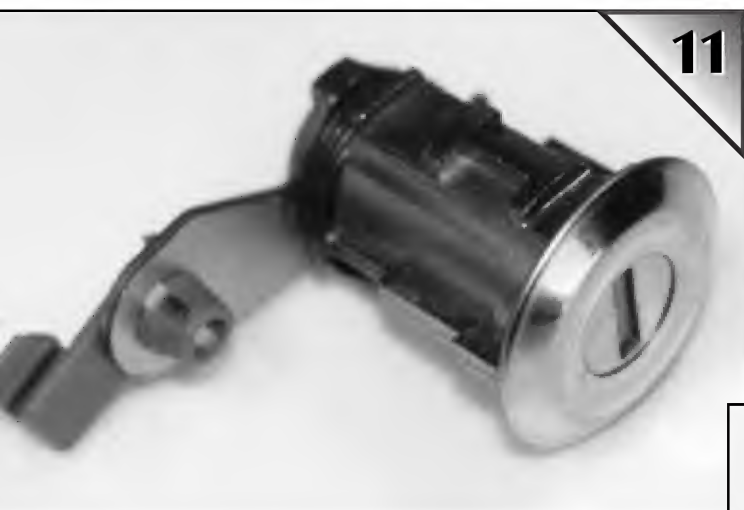
9

9. A view of the door with the panel removed. Remove the thin plastic access hole covers and insert a 10mm socket to take off the nut that holds the anti-theft metal arm in place.



10

Now you can insert a large screwdriver to slide off the metal horseshoe clip. The Nissan door clip can be a tough one to remove.



11

To disassemble the door lock you must remove the face cap. Replacement caps are available from ASP, part # P-16-205.

Next, remove the tailpiece, it is held on by a "C" clip.



12

AutoSmart Advisor

Contains virtually every car and part known to man up through 2000.



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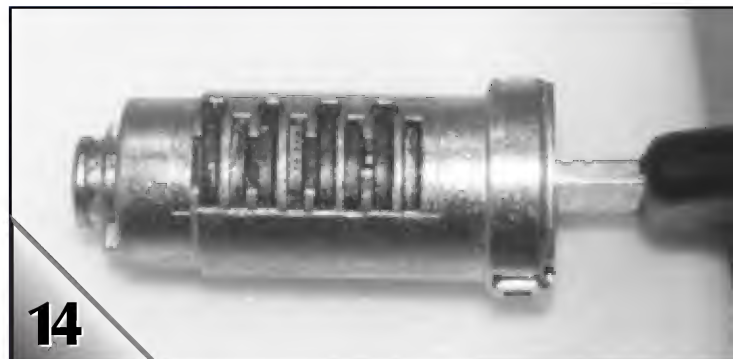
#ASA - 2000





13

The lock cylinder disassembled.



14

The door lock cylinder plug contains all eight tumblers.

TRUNK LOCK SERVICING



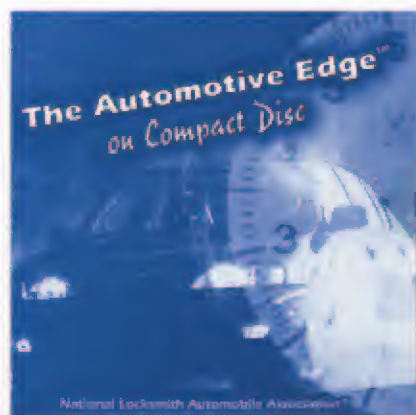
15

To service the trunk lock it will be necessary to remove the painted trim cover that sits on top of the lock cylinder and blocks the cylinder from being removed.



16

There are six plastic fasteners that must be individually unsnapped. Don't try to just pull up on the panel as this action can cause the panel to crack. They must be unsnapped from the inside.



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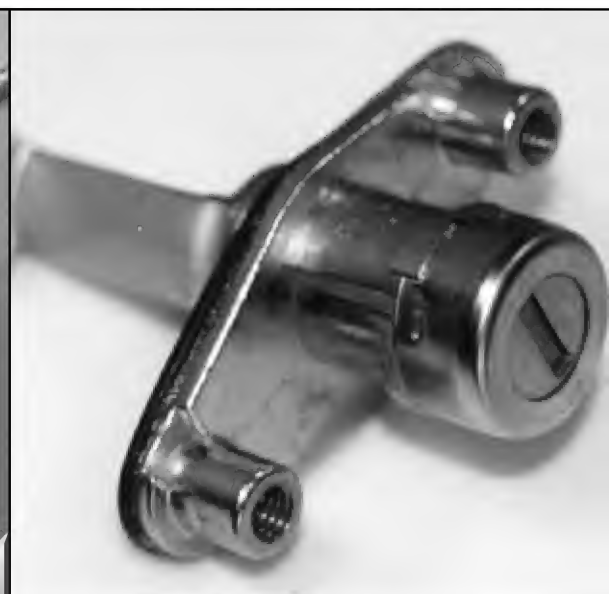
#AE - CD



There are also six 8mm nuts that have to be removed.



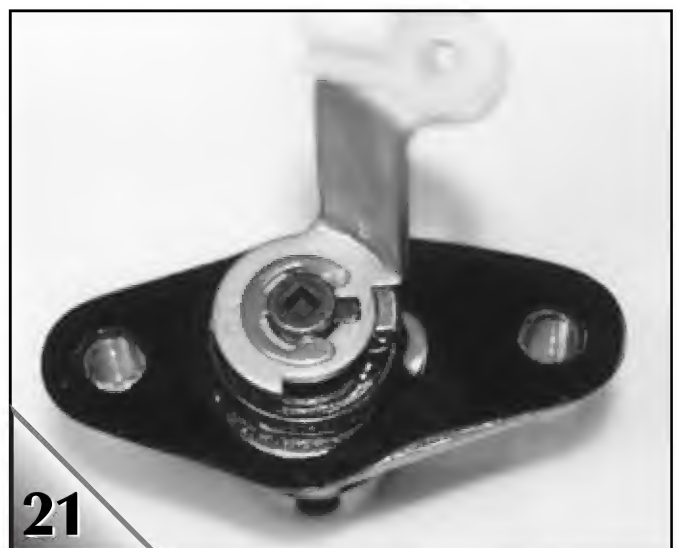
Now that the fasteners have been removed there is access to the lock cylinder.



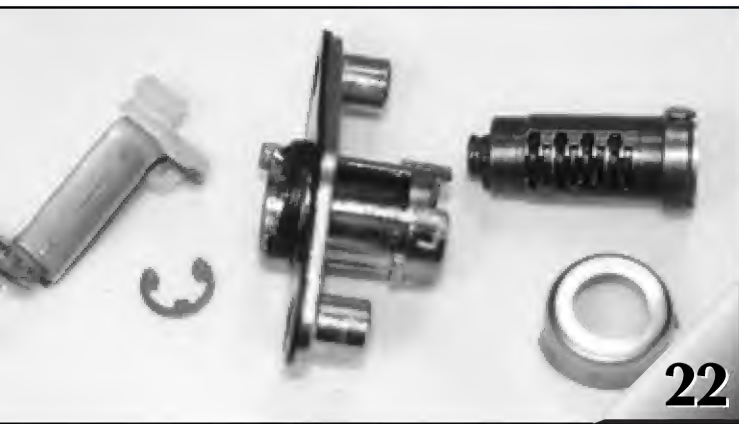
The lock cylinder is held in place by two 10mm bolts.



20 To disassemble the cylinder you must remove the face cap. The cap must re-used.

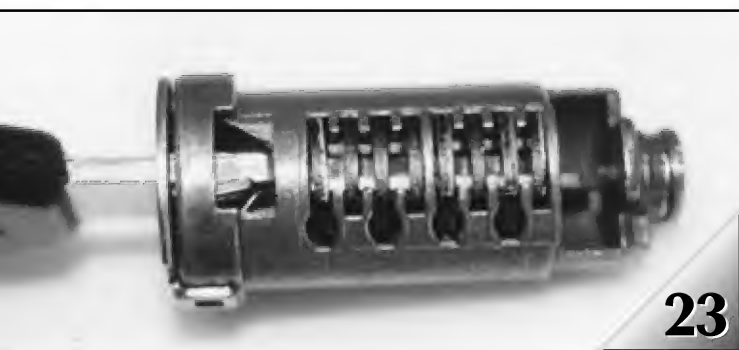


21 The tailpiece must also be removed. It is held in place by a "C" clip.



22

The trunk lock cylinder disassembled.



23

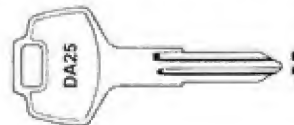
The trunk lock cylinder contains all eight tumblers.

SPACE AND DEPTHS

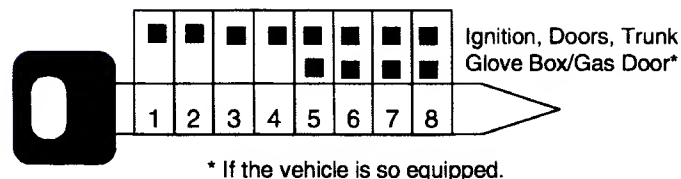
CODE SERIES: Y & X 001-8000

| Bow | | SPACING | | | | | | Tip | Cut to Cut: | |
|-----------------|------|--|------|---------------|------|-----------------------------------|------|------------|-------------|--|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | |
| .118 | .203 | .288 | .373 | .458 | .543 | .628 | .713 | .085 | | |
| Key Blanks: | | ILCO: X123, DA25, X124, DA28, X197, DA30, X210, DA31 | | | | SILCA: DAT13, DAT14, DAT15, NSN11 | | | | |
| Reed Codes: | | 07-03-096 | | | | HPC 1200 CM | | XF67, CF67 | | |
| Curtis Clipper: | | Cam DM-3 | | Carnage DM-3C | | ITL MFG: | | 138 | | |
| Pak-A-Punch | | PAK-N1 | | | | M.A.C.S.: | | 2 | | |

NOTES:



DEPTHS
1 .276
2 .256
3 .236
4 .217



* If the vehicle is so equipped.

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#GM - 2

13

Methods of Auto Entry

by Tom Lynch

There is always more than one way to play the game.

Earning a living in the craft of locksmithing can incorporate many skills and much knowledge. Carpentry, masonry, electronics, electricity and machining are used every day by locksmiths. These skills are cultivated over the years and many individuals become masters, who are respected and admired. This culmination of skill is acquired from “core knowledge” learned from concentrating on the methods used to perform certain tasks. For example, elaborate mathematical equations appear to most of us as a frightening challenge, when in reality they can be solved using the “core knowledge” of addition, subtraction etc. Having been taught properly about the foundation of a skill will enable anyone the ability to use reason to achieve their goals.

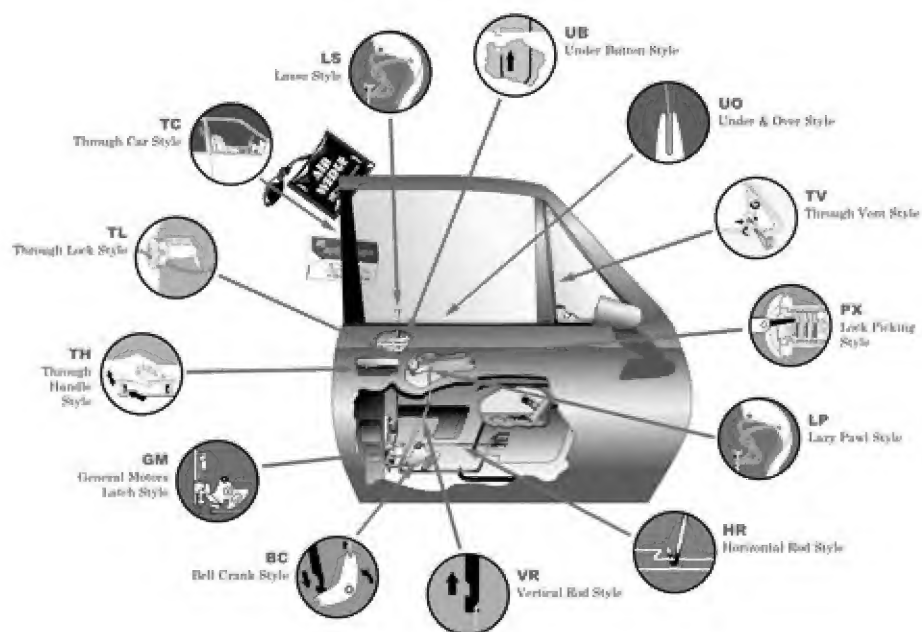
In the field of auto entry this concept is also applicable. By learning the methods of entry and the proper use of tools you can approach any opening with confidence and success. When I say learning the methods, I don't mean memorizing each and every vehicle out of a manual the size of Webster's dictionary. By realizing that there are only so many ways to

open a vehicle and understanding the styles of auto lock systems, one only needs to be proficient in tool usage.

Things were easy years ago when all you needed to know was how to push or pull on a vertical rod. It was also easy for everyone else too. However, the concept of raising a

vertical rod will always be the same no matter how you look at it. Whether it is bent in a new fashion or if it is shielded. You wouldn't necessarily need to read a novel on auto entry to understand that.

Understanding lock style linkages is relatively easy if you simplify the



1. There are 13 methods (or options) of attack that can be implemented to open a car.

information available. To begin, a vehicle will have one of three essential styles of linkage:

- Vertical (up & down)
- Horizontal (forward & aft)
- A combination of both vertical and horizontal (Bell Crank).

When approaching a car, there are 13 methods (or options) of attack that can be implemented to open a car which are: (See illustration 1.)

1. Under the Button Style
2. Under the glass and over into the interior
3. Through the vent window
4. Picking the lock
5. Attacking a lazy paw
6. Horizontal linkage
7. Vertical linkage
8. Bell crank
9. Door latch
10. Under the handle
11. Fishing through the lock cylinder
12. Wedging the door
13. Lassoing the lock button

From this understanding you now know what types of tools you need to accomplish a successful opening. Assuming there are no security shields,

you should have no problems. If shields have been used it still does not distract from the fact that the style of linkages are still the same and their movements have not changed! You just need to be creative and cause that linkage to respond as it is intended to. This is where "core knowledge" comes in to play.

Learning the proper tool and methods to use is the "core knowledge" repeated in this article. With this information you do not need to fear unknown models you may be called upon to open. It can also be said that many of the auto manufacturers are consistent in their usage of similar linkage designs used on their models.

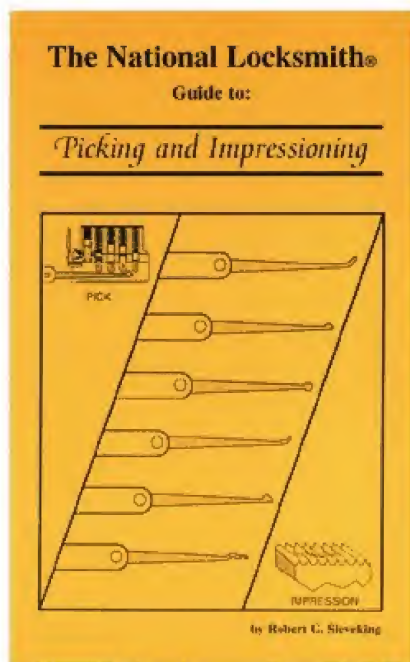
Using the "HPC Car Opening Authority" manual anyone can master the understanding of these methods I have mentioned. (See illustration 2.) By identifying all the methods available to attack the three styles of linkages, the locksmith doesn't need to learn a new way to open every car. Once you master the 13 methods you will be able to open virtually every vehicle on the road. Unlike other manuals, HPC does not print photographs of new cars that have the same linkage and opening methods as



2. The HPC Car Opening Authority manual.

models prior. By simply adding the opening method under that listing in the model index is sufficient. You know the method already! Why carry another manual that shows pictures of different models of the same manufacturer, which are all opened the same way?

When arriving to open an auto, first identify the linkage type. In time this becomes very easy, you will be able to do it before you exit your service vehicle. Choose the appropriate tool and open the car. It really is that simple. Don't let someone tell you otherwise. Car manufacturers tend to



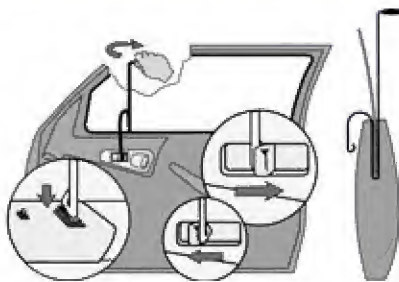
Picking & Impressioning

Here is the most complete book ever published on picking and impressioning locks! You will have everything you need to know about how to open almost every kind of lock that can be picked.

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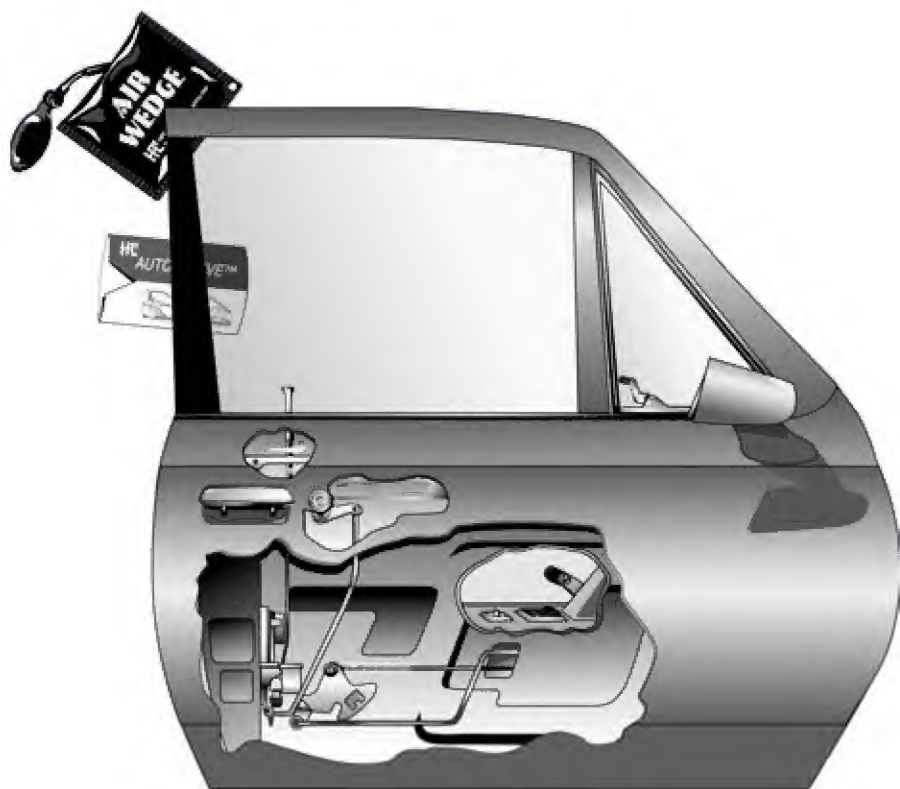
#PI



3. The HPC CO-59 or CO-60 tool works by going under the window into the car.

stay with a common linkage style on many models. For example: GM models using horizontal linkages are typically opened with great success using the HPC CO-59 or CO-60 tool by going under the window into the car and manipulating the interior lock button. (See illustration 3.)

In each instance no manual was needed since you will have mastered the methods. In cases where direct model information is needed to assist in special instructions, that too is listed in the Car Opening Authority. Use of a quality inspection light will benefit you greatly when looking into the door cavity to identify the area of attack. If approaching an Acura Integra, you will know that it is

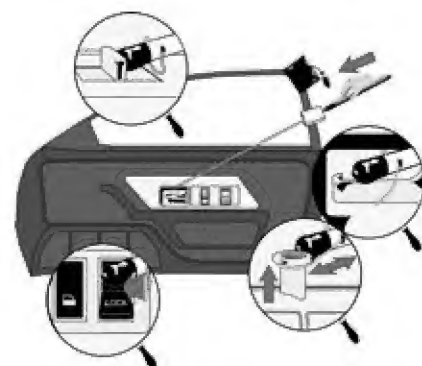


4. The HPC Air Wedge CO-99.

a horizontal linkage just by looking in the car door. However, it is shielded, so grab a CO-67 reverse hook to reach behind the shield. With the knowledge of the 13 methods of car opening and a good inspection light you should be able to conquer virtually everything you encounter. In cases where you may not be able to identify a linkage rod inside the door, don't panic. Remember that there are other ways to successfully achieve a professional opening.

Many times you will find the need to reach into the cars passenger area to either manipulate the lock buttons or to retrieve keys. It is this method of auto entry that has caused many a tech to get into trouble. The Neanderthal method of prying back the corner of the door with some demolition tool is not the way to do it. I say this to you, because I know there are individuals doing it. The use of chisels, hammer claws and nail pullers do not apply in auto entry! Every auto entry is your opportunity to impress your customer with your attention and care as a professional. I can assure you that you will get additional work as a result of your approach, so please leave these implements in your installation toolbox.

When called upon to open a vehicle in this manner, I have found the HPC Air Wedge CO-99 to be the absolute best device to gently spread either a door frame or a frameless window. (See



5. The HPC CO-78 five foot Super Snare tool.

illustration 4.) The Air Wedge easily slips between the door and weather stripping, then a pump is squeezed which inflates the wedge. This provides more than ample room to insert a car opening tool.

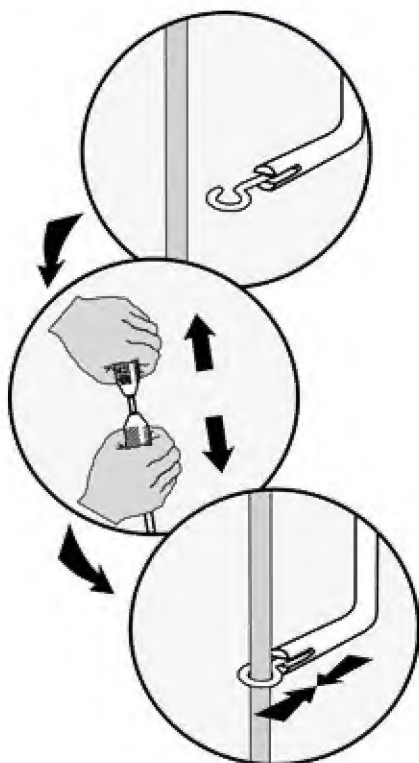
To prevent any damage to the weather stripping while maneuvering your tool through the opening you should use the Auto Sleeve AS-1 by HPC. This sleeve will create a protective tunnel for your tool to work in. This attention to detail will show your customers that you care about their car and that you are the professional.

I have had enormous success using the HPC CO-78 five foot Super Snare and the new CO-80. These two tools are truly great! (See illustration 5.) The Super snare has the ability to literally remove a key ring full of keys out of the ignition and remove them out through the

Modern Safe Locks

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#MSL - 1



6. An HPC CO-75 Horizontal Clutch tool.

opening made by the Air Wedge, or get them close enough to the window to read the key. The CO-80 is the strongest, easiest to manipulate bendable long reach tool I have found on the market.

When approaching a situation where you find that a linkage has been disconnected, don't worry. It doesn't matter, it will still be one of the three styles of linkages and it just needs to be manipulated as such. In these cases reach for a HPC CO-75 Horizontal Clutch or CO-76 Vertical Clutch. (See illustration 6.) These tools are unlike any on the market and they work! When the handles to these tools are separated, the hook at the end is pulled inward causing the tool to grip or bind the linkage rod whether it's connected or not. This tool will not let go until you do. Their use in small tight openings is also beneficial. I will caution you not to bend these tools aggressively. As with all car opening tools and methods, accuracy and finesse prevail.

Auto entry has been, and still is, a lucrative portion of the locksmith industry. Approaching it in a confident manner is essential to your success. For a more detailed look at the 13 methods of car opening, have your Distributor or Association call HPC and request a class. Learn the 13 methods of car opening and become a car opening authority.

TNL

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There is some new terminology that you will be seeing and hearing more and more in the near future. In the field of interchangeable core locks, some new terms have been recently coined. Some of you may have been thrown by the title of this article, and may wonder to what the term "Small Format IC" refers. It is a replacement for what most of us have referred to as Best-style (or type) or just Best compatible locks.



by Sal
Dulcamaro,
CML

We know that interchangeable core locks were first introduced by Frank Best fairly early in this century, and that initially interchangeable core and Best were one and the same. Over the years, competitors have introduced a variety of different IC locks in various formats. Best locks used small .108 inch diameter pin tumblers. When other companies introduced IC locks with standard .115 inch diameter (or even larger) pins, the physical size of the core was amplified. Numerous companies have tried to create high security IC lock cylinders small enough to fit inside the Best housings, but the size restraints were too limiting. With few exceptions, the cores small enough to fit into Best housings generally followed the format and pinning rules originally designed by Best.

With the proliferation of lock companies now making cores compatible with Best's format, there might be an inclination to stop assigning a brand affiliation (such as Best) to the physical format. I kind of like the new term (Small Format),



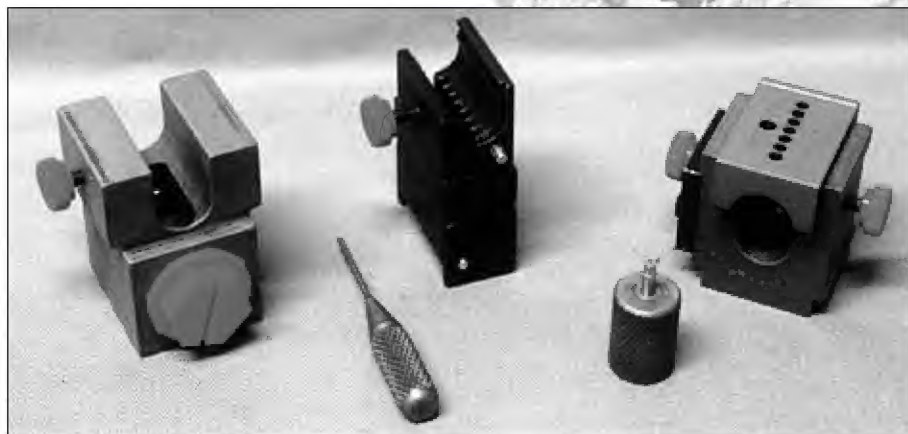
although I know I'll end up using the old term (out of habit) for some time to come. So, instead of saying Best-style IC, I'll use the term Small Format IC or its abbreviation SFIC.

A-1 Security Manufacturing Corp. is responsible for a large assortment of interesting and useful locksmith tools. In fact, they make an extensive variety of tools specifically for use with the Small Format IC lock cylinders. Let's see what they are and what they do.

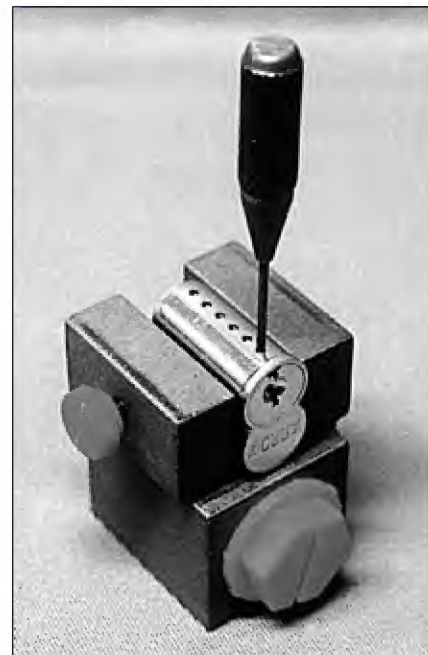
Core Holding Fixtures...

A number of different servicing procedures require a means of holding a core securely in some type of device. A-1 makes a variety of metal fixtures for loading and unloading tumblers from an I-Core. *Photograph 1*, shows three different fixtures, which are available individually or (at a substantial savings) as a group. From left to right, they are: the "Dumping Block" (part #TB3), "The Block" (part #TB1) and the Dual Purpose Capping Block (part #TB2). When purchased together, they are referred to as the "Complete Service Kit for I/Core" (part #ICKT).

The Dumping Block is shown in *photograph 2*. The primary purpose of the fixture is to unload tumblers and springs from currently coded I-Cores. The core is held upside down and held in place with a thumbscrew on the left side of the fixture. Small diameter ejector holes can be seen at the



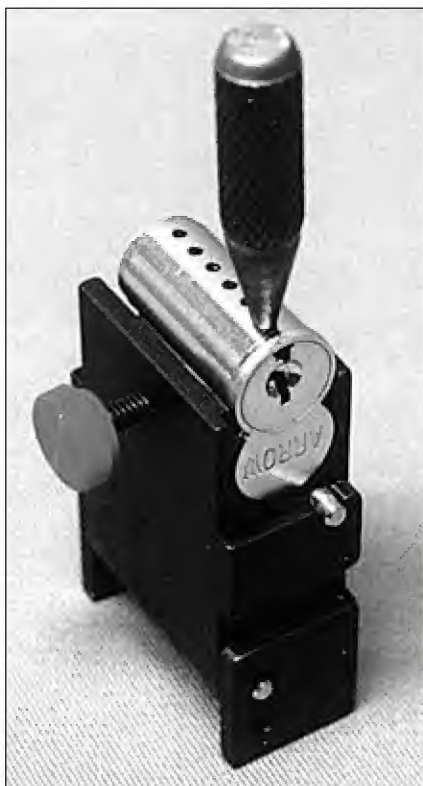
1. A-1 makes a variety of metal fixtures for loading and unloading tumblers from an I-Core.



2. The Dumping Block's primary purpose is to unload tumblers and springs from the core.

bottom side of the I-Core in line with each of the pin chambers.

In the photograph a single pin ejector punch tool is part way in the chamber at the face end of the I-Core. The ejector punch is included with the fixture. Tapping on the handle of the punch will drive the tumblers through and knock off the chamber cap on the top side of the I-Core. The old pins and springs will accumulate in the



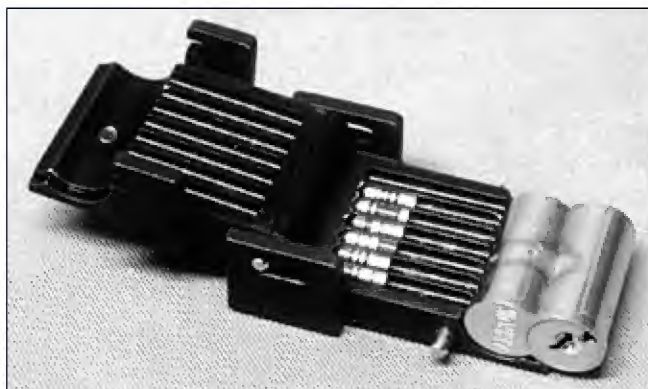
3. The Block is a rather ingenious and useful tool.

open cavity at the bottom of the Dumping Block. A red plastic threaded cap unscrews to allow disposal of the tumblers and springs.

"The Block" is shown in *photograph 3*. It is a rather ingenious and useful tool. One of its purposes is also to unload tumblers, but it's for the primary purpose of decoding the contents of the I-Core. A single pin ejector punch has been driven all the way through the front pin chamber position. The Dumping Block accumulates all the tumblers and springs in a large compartment (for re-use or disposal). The Block precisely contains the contents of each chamber (in proper order) to allow measurement and decoding of all the tumblers.

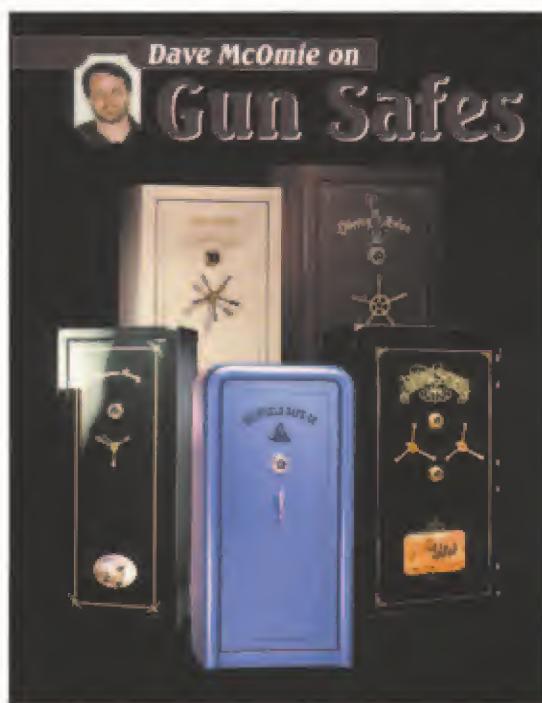
Photograph 4, shows the fixture

opened to reveal each pin stack isolated by individual chamber position. This type of fixture is a must when trying to determine a control key, or any other key fitting operation. Best and other SFIC locks have required pin stacks for each chamber. Best has three different pinning formats



4. The fixture opened up to reveal each pin stack isolated by individual chamber position.

Gun Safes



Need a drill point or relocker drill point on a gun safe?

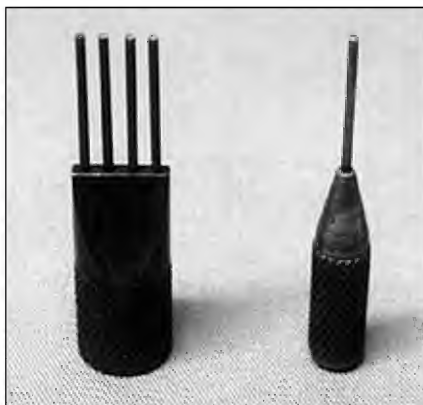
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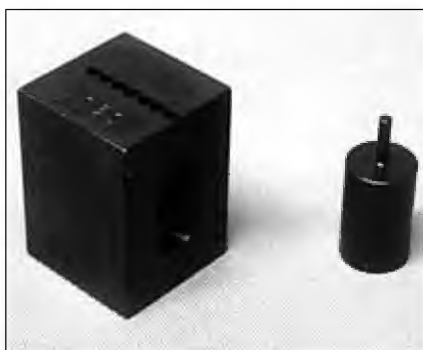
#GS - 1



5. The Dual Purpose Capping Block.



6. The four pronged punch on the left, and the single prong ejector punch on the right.



7. A-1 recently introduced its new Duo Block, which is a reversible capping block.

designated: A-2, A-3 and A-4. A-2 has ten steps (and matching key cut depths) with a .0125 inch increment. The total numbered pin stack should equal 23. A-3 has seven steps with an .018 inch increment, and a pin stack of 16. A-4 has six steps with a .021 inch increment and a pin stack of 14.

If you wish to use The Block to decode a control key, you should take the top pin of each stack and decode the pin size. For A-2, that value should be subtracted from 13. The remaining number should be the control key cut

value for that particular pin chamber position. This method presupposes that the pin stacks all equal 23 and has otherwise been coded properly. If the pin stacks don't equal 23, the rest of the pin stack should be decoded in order to determine what value the top pin should have been. That value should then be subtracted from 13 to find the control key cut.

A-3 and A-4 have different pin stack heights, and likewise have a different formula to determine the control key cut. For A-3, subtract the top pin value from 9. A-4 requires that you subtract the top pin value from 8. Like the A-2 system, this will only work with properly coded pin stacks. Since A-2 is by far the typical SFIC installation, you will probably rarely (if ever) deal with A-3 or A-4.

The Block can also be used for decoding a master key, but it has the same limitations as decoding non-IC cylinders for a master key. If you have an I-Core and a user (change) key, a master key is easily determined. Without a change key, it is much more complicated.

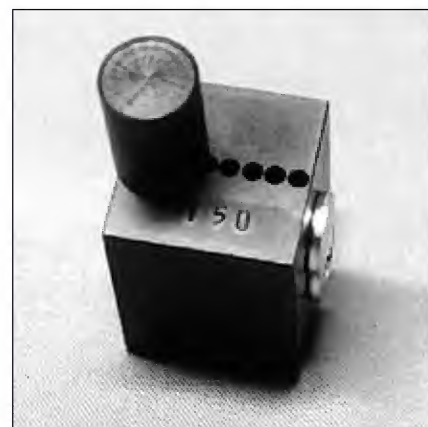
The "Dual Purpose Capping Block" is shown in *photograph 5*. It is currently set for I-Cores that have individually capped chambers (which is most SFIC cylinders). A thumbscrew on the right side holds the I-Core in the fixture. After the chambers are filled with tumblers, a spring is placed in the chamber followed by a chamber cap. The included capping tool is in position for capping a pin chamber. The thumbscrew on the left side of the fixture is for storing the extra piece used for pressing the flat metal tumbler cover for Falcon I-Cores. Although an ejector pin punch is included with The Block, single pin and multi-pin ejector punches can be purchased separately. *Photograph 6*, shows the four pronged punch (part #TBMP) on the left, and the single prong ejector punch (part #TBIP) on the right.

A-1 recently introduced its new "Duo Block" (part #TB4), shown in *photograph 7*. The Duo Block is a reversible capping block with the standard .150 SFIC pin chamber spacing on one side and .140 spacing on the reverse side. *Photograph 8*, shows a standard I-Core in the fixture with the capping tool over one of the chambers. The .140 inch pin spacing is primarily for Peaks IC lock cylinders.

cylinders. That side of the fixture is shown in *photograph 9*.

Other Tools...

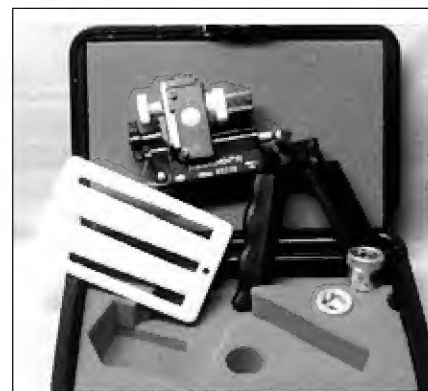
A Pak-A-Punch I/C is shown in *photograph 10*. It is a hand held key punch designed for cutting most types of SFIC keys. It will cut original and aftermarket Best, Falcon, Arrow, KSP



8. A standard I-Core in the fixture with the capping tool over one of the chambers.



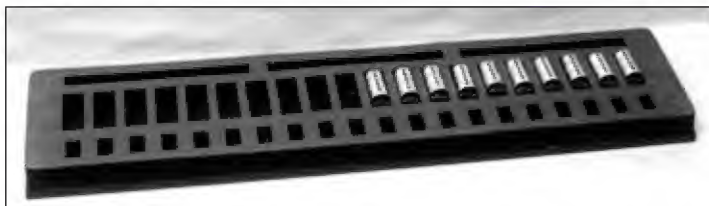
9. The .140 pin spacing is primarily for Peaks IC lock cylinders.



10. The Pak-A-Punch I/C is a hand held key punch designed for cutting most types of SFIC keys.



11. The Capping Press Plus is the only Capping Press that caps and dumps I-Cores.



12. The Combinating Tray is made of PVC and high-density foam for holding and combining up to 20 individual I-Cores.



13. A-1's Stamping Plate is made of Delrin and is set up for stamping keys or I-Cores.

and many other similar keys. It is not set up to cut Medeco KeyMark, some Peaks and few others that have certain special physical features to their keys. If you need to cut some of the less standard SFIC keys, verify that they can be cut with the Pak-A-Punch.

The Pak-A-Punch I/C comes equipped with the key vise for the tip

stopped keys and three depth knobs. The A-2 depth knob comes pre-installed, but the A-3 and A-4 depth knobs which are included are quickly and easily installed if they are needed. To the left side of the carrying case in *photograph 10*, is the I/Core Key Gauge. It can be used to decode A-2, A-3 and A-4 keys. It comes as an accessory with the Pak-A-Punch I/C, but it can be purchased separately as part #04.

For those who need to service a high volume of I-Cores, A-1 also makes the "Capping Press Plus" (part #CAP1), shown in *photograph 11*. A-1's literature indicates that it is the only Capping Press that caps and dumps I-Cores. They also indicate that it costs about half as much as other less versatile capping presses. It is shown set up to cap seven chambers all at once.

Another item for high volume users is the Combinating Tray for I/Core (part #12), shown in *photograph 12*. It is a tray made of PVC and high-density foam for holding and combining up to 20 individual I-Cores.

Photograph 13, shows another useful tool. It is A-1's Stamping Plate (part #35). It is made of Delrin, and it is set up for stamping keys or I-Cores (front or side of core).

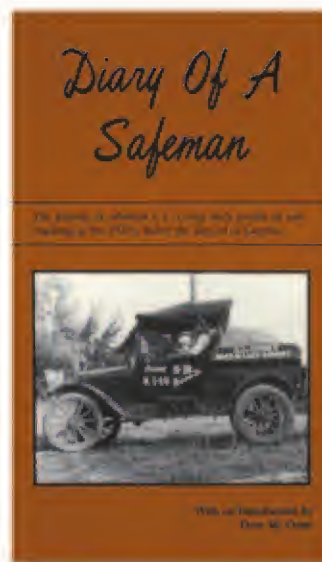
As you know, having the correct tool for the job can make all the difference in the world. When it comes to servicing IC locks, proper tools is almost a necessity and A-1 Security Manufacturing offers everything you need to properly service these locks.

A-1 IC (and other) tools should be available from most locksmith supply companies. If your supplier doesn't carry them, you can contact:

A-1 Security Manufacturing Corp.,
3001 West Moore Street,
Richmond, VA 23230.
Phone: 804/359-9003.
FAX: 804/359-9415.
Or circle #265 on Rapid Reply.



Diary Of A Safeman



This book is a real gem...the private safe diary of old time safecracker C.L. Corey.

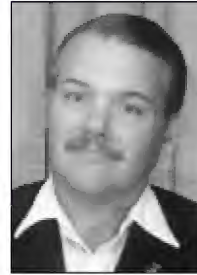
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#DIARY

BEGINNER'S CORNER

SLYDELOCK® Patio Door Lock



by
**Jim
Langston**

The existing method of locking patio doors with a broom stick or other home made contraption jammed in the track has been in existence for a long time. (See photograph 1.) Not only is that security method not practical, it has been proven to not be as safe as many believe. Homeowners believed the myth that patio doors could be securely



1. The existing method of locking patio doors with a broom stick or other home made contraption jammed in the track has been in existence for a long time.



3. With SLYDELOCK® you can even keep the door locked open up to 5-inches.



2. SLYDELOCK® was designed and engineered specifically for patio doors.

locked with a wooden stick, a bar, or a pin lock. What they didn't know was that it takes an intruder less than 15 seconds to lift a patio door right out of its track. Intruders don't slide the doors, they lift them.

Now there's a new unique device designed and engineered to securely lock your patio doors. SLYDELOCK® was designed and engineered specifically for patio doors. It prevents intruders from lifting patio doors from their track, which is how intruders usually defeat traditional locking devices. (See photograph 2.)



4. Fasten the door mount to the bottom of the sliding door frame.

SLYDELOCK® is permanently installed on the door and frame and slides with the door which eliminated bending down to fetch a broom stick, searching for keys to unlock a lock or dismantling security bars to open the door. With SLYDELOCK® you can even keep the door locked open (up to 5-inches) to let fresh air through while keeping intruders out. (See photograph 3.)

Here are some of the unique features SLYDELOCK® has to offer:

- Was designed and engineered exclusively for patio doors.
- Is permanently installed and slides with the door.
- Is built of strong Lexan® plastic and reinforced aluminum alloy tubing.
- Stops intruders from lifting the door off its track.
- Allows a patio door to be "locked open" up to 5-inches.
- Fits all patio doors with outside or inside sliding door up to 6 feet.
- Caries a lifetime product guarantee.



5. Remove any rubber door stop bumpers on the frame.

Installation on Doors with Inner Sliding Panel

When installing the SLYDE-LOCK®, first determine if the primary sliding door slides on the inside track or outside track. Mounting procedures will vary according to whether it is an inside slide or outside slide.

On doors with an inner sliding panel, close and lock the door. Using two #10 x 3/4" screws, fasten the door mount to the bottom of the sliding door frame, above any obstruction. (See photograph 4.) When doing so, remove the bar from the mount, which easily snaps off a pivot pin. Make sure that the door mount and the track for the lock assembly are well aligned vertically. Use the bottom track for the sliding door as a guide line.

The mounting holes should be pre-drilled with a 9/64" drill to a depth of 3/8" minimum. Make sure that you have sufficient dept for the length of the screw to be secured. When installing these screws, be careful not to damage the glass or the thermal seal of the panels.

With the door mount in place re-attach the security bar to the door mount by sliding the lower rod end over the pivot pin from a vertical position.

Before mounting the slide track to the door frame remove any rubber door stop bumpers on the frame to allow installation of the track slide. (See photograph 5.)

Slide the lock assembly onto the track and lock in the bottom position then pivot the track onto the door frame. (See photograph 6.) Using two #10 x 1-1/2" screws, fasten the track to the outer door frame at the top and middle positions. (See photograph 7.) Unlock and open the door to assure lock assembly is sliding freely, then fasten the track to the door frame at the bottom position.

To allow the door to be locked in the open position, open the door five inches and lock the SLYDELOCK. (See photograph 8.)

If there is a gap above the sliding door in the track, it may be possible to lift the leading edge of the door. To prevent this, mark the top of the door frame above the door end and install the #12 x 3" screw to a depth that will allow the door to slide freely past the screw head without binding.

Secure the adjacent door to the door frame with three #10 x 3/4" screws.

The completed installation can be seen in photograph 9.



6. Slide the lock assembly onto the track and lock then pivot the track onto the door frame.



7. Using two #10 x 1-1/2" screws, fasten the track to the door frame.

Installation on Doors with Outer Sliding Panel

Install the door mount with two #10 x 1-1/2" screws using the side mount screw locations to the bottom leading edge of the sliding door. The two side mount screw locations on the door mount requires pre-drilling with a 9/64" drill bit.

The track is then installed to the end of the fixed door, using three #10 x 1" screws as per the previous instructions.

For added security, open the sliding door completely and install a #12 x 3" screw into the track above the door to a depth that will allow the door to slide past without binding.

On outer sliding panel doors the outer panel should not be locked in an open position more than 2-inches.



8. To allow the door to be locked in the open position, open the door five inches and lock the SLYDELOCK®.

Installation on Doors with 4 Sliding Panels

The SLYDELOCK® is installed to the innermost sliding door. This may require the removal of the inside handle of the adjacent door. Cover the remaining screw holes with PVC tape available from your local hardware supplier.

Secure the adjacent door to the door frame with three #10 x 3/4" screws.

Installation of this product is quick and very easy. It's no more than a 15-minute installation job.

As with any new product, a number of curious questions will arise. The following are some of the more commonly asked questions and answers about SLYDELOCK®:

Q. Will SLYDELOCK® fit an outside sliding door?

A. Yes, SLYDELOCK® fits all inside and outside sliding patio door up to 6 feet.

Q. What is SLYDELOCK® made of?

A. SLYDELOCK® is made of strong resistant space age Lexan® plastic that will not change color or shape due to



9. The completed installation.

whether. The rod is reinforced aluminum alloy tubing.

Q. When installing do we need to be directly above the bottom track of the sliding door for the alignment?

A. No: You may measure away from the bottom track, use the bottom track of the sliding door only as a guide line.

Q Trying out the SLYDELOCK® in the unlock position, I felt that the locking assembly is sticking near the middle of the track?

A. Check and see if the three screws are over-torqued and causing the track to deviate. If so, ease the necessary screws. If not, there might be a slight miss alignment, you may spray silicon on a rag and wipe it onto the track.

For the latest in patio door security, contact:

SLYDELOCK®
25 Cousineau St.
Hull, Quebec
Canada J8Y 3M9

Phone: 800-664-5625 or (819) 770-1020

Fax: (819) 771-5295

Web: <http://www.SLYDELOCK.com>

Or circle #320 on Rapid Reply.



Antique Padlocks

The National Locksmith
Guide to:

Antique Padlocks



by Jack Roberts, CML

Finally there is a book to give you all the information you need about old interesting locks.

CLICK HERE TO LEARN MORE



#PAD - 1

Corporate Safe

By Dale W.
Libby, CMS



Corporate Safes come in many shapes, sizes, and even names. They have safes and cash handlers. We have already discussed the 3600 LaGard Lock (the swingbolt lock) that is very popular on these cash handlers and fire safes. I want to make a general statement before going on in this article, and it concerns all safes and chests that have the swingbolt lock installed (at least all that I have seen!)

First, determine the handing of the lock. Look down the hole that the wire from the keypad goes through. If the wire goes up, the bolt is down. If the wire harness goes down, the bolt is up. This secret only refers to locks mounted vertical up (VU) or vertical down (VD).

With these locks, they are always mounted with the flat side of the lock bolt towards the opening edge of the door (opposite the hinge location). When we know this, we know exactly where to drill for the solenoid to open the lock. The flat side of the bolt and the solenoid are on the same side. This will tell you exactly where to drill. The drill point for the LaGard 3600 solenoid is 1-1/8 inch toward the bolt position (from hole center) and 3/8 inches toward the flat side of the lock.

Knowing this, a 3/16 inch hole will disable and ruin the lock, but will get the safe open. The next safe I worked on was a Corporate Safe with a LaGard 2200 key lock. I was looking forward to this opening because I have a pick for the 2200 LaGard key lock. *Photograph 1*, shows the Corporate "CSS" logo.

The key would not work. As in real life, the actuality and the facts were a little different. *Photograph 2*, shows

the shutter key guard, which flips open and shut. Also, there is a mark on the guard, which shows how to insert the key. The key has a large groove in it, which aligns the key within the lock.

This lock is easy to ascertain the mounting footprint. Just look down the keyhole with an otoscope. You will see an aligning lug that the wheels are aligned with. The position of the bolt

is 1/4 turn (90 degrees) to the left. In this unit, the key guide lug was located at 3:00 o'clock. 1/4 turn to the left (counter clockwise) made the bolt at 12:00 o'clock or vertical up.

The problem was rather unique. I asked to see the manager's keys. When he showed me both his and the assistant managers keys, many of the cuts of the key were gnarly and not straight. When I inserted the key, or

tired to insert one of these keys, the whole lock body moved into the cash handler compartment.

The key was bent by trying to force the key into the loose angled lock case. When



1

The Corporate "CSS" logo.



2

The shutter key guard, which flips open and shut.

the case moved back, the keyway bent down at an angle not allowing the key to be inserted. The managers tried to force the key into the lock, thus bending the key.

The first thought I had was to insert the pick and open the lock, however the locating pin was bent and the angle of the lock was incorrect. It was too acute to allow the pick to be inserted.

I also realized that this safe used a spring-loaded relocker held by a piece of metal attached to the back of the lock. (See photograph 3.) If I was careless, I would set off the relocking trigger. More on this soon. My only resolution to this lockout was to drill for the fence. I would need to drill it off and probe the lever down to the open position, but I never got that far. Photograph 3, shows the safe as soon as I opened it. The bolt was not thrown, but the safe opened anyway. This is what happened.

I installed the StrongArm drill rig after removing the shutter mechanism. The holes were perfect for the StrongArm base plate attachment and for drilling the LaGard lock. I drilled the soft steel for the edge of the lever which is about 23 on the dial with the lock mounted VU. The reason I used the StrongArm

Mini-Rig was for pin point accuracy this unit affords.

After easily penetrating the door, I could not drill the lock, for it was being forced back by the drill bit. I stuck a LaGard key partially into the keyhole and pulled out to hold the lock next to the inside of the door. This worked, however I could have used a third hand.

Once I penetrated the lock and drilled off the fence, I was all set to probe the lever to unlock the unit. This was easier said than done. While trying to probe the lock and hold it against the door, I tried the opening "T" handle. The safe opened. I was surprised because I had not pulled the locking bolt into the lock.

What happened was, while probing the lock, it must have moved enough for the bolt to go under the locking bar, or possibly moved away from the door face enough to let the handle open the door. Either way, the safe was open, in spite of my tactics.

Photograph 4, shows the LaGard 2200 lock with the cover removed which sets off the relocking device located next to the lock. This spring-loaded metal bar snaps up and blocks the movement of the boltbar. To deactivate the relocker, drill 1 inch above the spindle hole and 1-1/2 inches to the right or hinge side of the door. This will put you into position to deactivate the relock device. My favorite way is to hook the spring and pull it through the hole, thus allowing the bar to fall out of the way.

Alternate methods include drilling and probing the bar down enough or just drilling through the bar. These safes are easy to open and service. There was only one screw holding the lock to the door. I repaired the door and attached a new lock to the door with screws that were coated with Lock-Tite. They would lose again. In fact, when servicing combination locks, I usually goop up at least two of the mounting screws to make sure that the lock will not come loose.

Open, determine handing, and prosper!



This safe used a spring-loaded relocker.



The LaGard 2200 lock with the cover removed.

1999 Reader's Choice Awards



Once again it is time to present the products you feel are the best in their class. This is the fifth year *The National Locksmith* has presented the Reader's Choice Awards.

The company names presented here are a reflection of your vote for the best in each category.

There are a total of 45 products or manufacturers that you felt deserve recognition for outstanding quality,

service and design. *The National Locksmith* extends its congratulations to all those who have been granted a Reader's Choice Award.

General Locksmith Tools



HPC Co. Inc.
 3999 N. 25th Ave.
 Schiller Park, IL 60176
 847-671-6280
Circle #272 on Rapid Reply

A-1 Security Mfg. Co.
 3001 W. Moore St.
 Richmond, VA 23230
 804-359-9003
Circle #271 on Rapid Reply

Tech Train Productions
 P. O. Box 15401
 Pensacola, FL 32514
 850-476-7197
Circle #273 on Rapid Reply

Key Machines



Framon Mfg. Co., Inc.
 909 Washington Ave.
 Alpena, MI 49707
 517-354-5623
Circle #274 on Rapid Reply

HPC Co. Inc.
 3999 N. 25th Ave.
 Schiller Park, IL 60176
 847-671-6280
Circle #275 on Rapid Reply

Ilco Unican
 400 Jeffreys Rd.
 Rocky Mount, NC 27804
 252-446-3321
Circle #276 on Rapid Reply

Padlocks



American Lock Co.
 3400 W. Exchange Rd.
 Crete, IL 60417
 708-534-2000
Circle #278 on Rapid Reply

Abus Lock Co.
 P. O. Box 1020
 Londonderry, NH 03053
 603-426-5277
Circle #277 on Rapid Reply

Master Lock
 2600 N. 32nd St.
 Milwaukee, WI 53210
 414-444-2800
Circle #279 on Rapid Reply

Door & Lock Hardware



Arrow Lock
 103000 Foster Ave.
 Brooklyn, NY 11236
 718-257-4700
Circle #280 on Rapid Reply

Kwikset Corp.
 #1 Park Plaza
 Irvine, CA 92714
 714-474-8800
Circle #281 on Rapid Reply

Schlage Commercial Lock Div.
 1915 Jamboree Dr.
 Colorado Springs, CO 80920
 719-264-5332
Circle #282 on Rapid Reply

Automobile Locks



BWD Automotive-Alabama
 P. O. Box 1349
 Selma, AL 36701
 334-874-9001
Circle #284 on Rapid Reply

ASP
 P. O. Box 10
 Redmond, WA 98073-0010
 425-556-1900
Circle #283 on Rapid Reply

Strattec Security Corp.
 333 W. Goodhope Rd.
 Milwaukee, WI 53209
 414-247-3333
Circle #285 on Rapid Reply

Door Closers

LCN Closers

Box 100
 Princeton, IL 61356
 815-875-3311
Circle #286 on Rapid Reply

Norton/Div. of Yale Sec., Inc.

P. O. Box 25288
 Charlotte, NC 28229-8010
 800-438-1951
Circle #287 on Rapid Reply



Sargent Mfg. Co.

100 Sargent Dr.
 New Haven, CT 06511
 203-562-2151
Circle #288 on Rapid Reply

Keyless Entry Locks

Locknetics Sec. Eng.

P. O. Box 9337
 Forestville, CT 06010
 860-584-9158
Circle #290 on Rapid Reply

Simplex Access Controls

2941 Indian Ave.
 Winston-Salem, NC 27105
 800-849-8324
Circle #291 on Rapid Reply



Alarm Lock Systems

333 Bayview Ave.
 Amityville, NY 11701
 516-789-4871
Circle #289 on Rapid Reply

Exit Panic Devices

Corbin Russwin (Architectural Hardware)

1501 E. Pennsylvania St.
 Allen Town, PA 18103
 800-652-6729
Circle #292 on Rapid Reply

Detex Corp.

302 Detex Dr.
 New Braunfels, TX 78130
 830-629-2900
Circle #293 on Rapid Reply



Von Duprin

Box 6023
 Indianapolis, IN 46206
 317-897-9944
Circle #294 on Rapid Reply

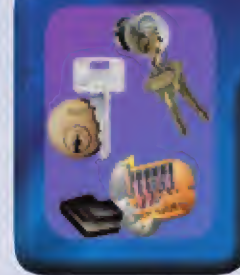
High Security Cylinders

Mul-T-Lock USA Inc.

300-1 Ropute 17 South,
 Suite A
 Lodi, NJ 07644
 973-778-3222
Circle #296 on Rapid Reply

Schlage Commercial Lock Div.

1915 Jamboree Dr.
 Colorado Springs, CO 80920
 719-264-5332
Circle #297 on Rapid Reply



Medeco Security Locks

P. O. Box 3075
 Salem, VA 24153
 540-380-5000
Circle #295 on Rapid Reply



Tools

"Tech-Train is the best. Never have any problems with returns, great technical support and willingness to support."

Ben Doerr
 Doerr
 Openers
 Manassas,
 VA

Readers Choice Comments

Locksmiths comment on their favorite manufacturers, distributors and products.

Key Machines

"My HPC 1200CMB broke so I called them long distance for service information. The person I spoke with told me to call back on their 800 number. Then stayed on the phone with me for more than an hour, telling me how to fix it."

Moshe Vogel
 Vogel's Locksmith
 Long Beach, CA

"I think Framon makes the best key machines. They are built to last."

Jay Mischo
 B & B Locksmith
 Cedar City, UT

"I've picked Ilco as a primary manufacturer because I have many years of experience with their products and have found them excellent."

Michael Eittassington
 Mike's Key Shop
 New London, CT

Keyless Entry

"Simplex locks have a way of selling themselves with good looks and great prices."

Mark Hinkle
 Mark's Lock & Key
 Straw Plains, TN



High Security Locks:

"Medeco to me is continuing excellence. I am very proud whenever I can install their products."

Grant Mitchell
 Top Brass Key
 & Lock Co
 Gouverneur,
 NY

continued on page 58

Electro Magnetic Locks



Locknetics Security Engineering
P. O. Box 9337
Forestville, CT 06010
860-584-9158
Circle #298 on Rapid Reply

Rofu International
2004-B 48th Avenue Ct. E
Tacoma, WA 98424
253-922-1828
Circle #299 on Rapid Reply

Securitron
550 Vista Blvd.
Sparks, NV 89434
702-355-5625
Circle #300 on Rapid Reply

Access Control



Securitron
550 Vista Blvd.
Sparks, NV 89434
702-355-5625
Circle #302 on Rapid Reply

Locknetics Security Engineering
P. O. Box 9337
Forestville, CT 06010
860-584-9158
Circle #301 on Rapid Reply

Von Duprin
Box 6023
Indianapolis, IN 46206
317-897-9944
Circle #303 on Rapid Reply

Electric Strikes



Adams Rite Mfg. Co.
4040 S. Capitol Ave.
City Of Industry, CA 91749
562-699-0511
Circle #304 on Rapid Reply

HES Inc.
2040 W. Quail Ave.
Phoenix, AZ 85027
602-582-4626
Circle #305 on Rapid Reply

Trine Products
1430 Ferris Place
Bronx, NY 10461
718-829-4796
Circle #306 on Rapid Reply

Safes



Gardall Safe Corp.
P. O. Box 30 Eastwood
Station
Syracuse, NY 13206
315-432-9115
Circle #308 on Rapid Reply

Amsec
11925 Pacific Ave.
Fontana, CA 92337
909-685-9680
Circle #307 on Rapid Reply

Meilink Safe Co,
111 Security Pkwy.
New Albany, IN 47150
812-941-0024
Circle #309 on Rapid Reply

Safe Locks



Ilco Unican
400 Jeffresy Rd.
Rocky Mount, NC 27804
252-446-3321
Circle #310 on Rapid Reply

Mas-Hamilton Group
805D Newtown Circle
Lexington, KY 40511
606-253-4744
Circle #311 on Rapid Reply

Sargent & Greenleaf
P. O. Box 930
Nicholasville, KY 40340-0930
606-885-9411
Circle #312 on Rapid Reply



Software

InstaCode
The National Publishing Co.
1533 Burgundy Pkwy
Streamwood, IL 60107-1861
630-837-2044
Circle #314 on Rapid Reply

HPC, Inc.
3999 N. 25th Ave.
Schiller Park, IL 60176
847-671-6280
Circle #313 on Rapid Reply

Reed Codes
Locksmith Publishing Co.
850 Bussee Highway
Park Ridge, IL 60068
847-692-5940
Circle #315 on Rapid Reply

Readers Choice Comments *continued from page 56*

High Security Locks

"Mul-T-Lock is the best. When explaining a problem you are talking to a locksmith that knows his or her stuff. They are locksmith oriented."

Aris S. Arsenis
Alvin Locksmith Service
Alvin, TX

Door & Lock Hardware

"I believe Ingersoll-Rand has the best quality and support. Ingersoll-Rand is the parent company of Schlage."

Bill Gray
The Security Center
Livermore, CA

Safe Locks

"Mas-Hamilton is excellent because of their innovative ideas."

Jack Prietas
Kihei Safe & Locksmith Service
Kahului, HI



Road Rally

A showcase of locksmith service vehicles.

If you think your vehicle has what it takes to be featured here, send photographs and descriptions to:
The National Locksmith, Road Rally, 1533 Burgundy Parkway, Streamwood, Illinois 60107-1861.

Owner: Jeff Parson,
Bowling Green, KY

Model: 1997 Ford
E350 Cargo Van



Owner: Doug Aaron,
West Newton, MA

Model: 1993 Dodge
250 Ram Van

Quick Entry

UPDATE

by
Steve
Young



TOYOTA LAND CRUISER

When the new Toyota Land Cruiser was introduced in 1991, it immediately developed a reputation for being difficult to unlock. (See photograph 1.) The weather-stripping at the base of the window, on both the front and rear doors, has a lip that interlocks with a matching lip on the window regulator. As a result the window fits so tightly that it is extremely difficult to open enough to insert a traditional car opening tool. Fortunately, there is a relatively simple way to unlock the vehicle without attacking the door.

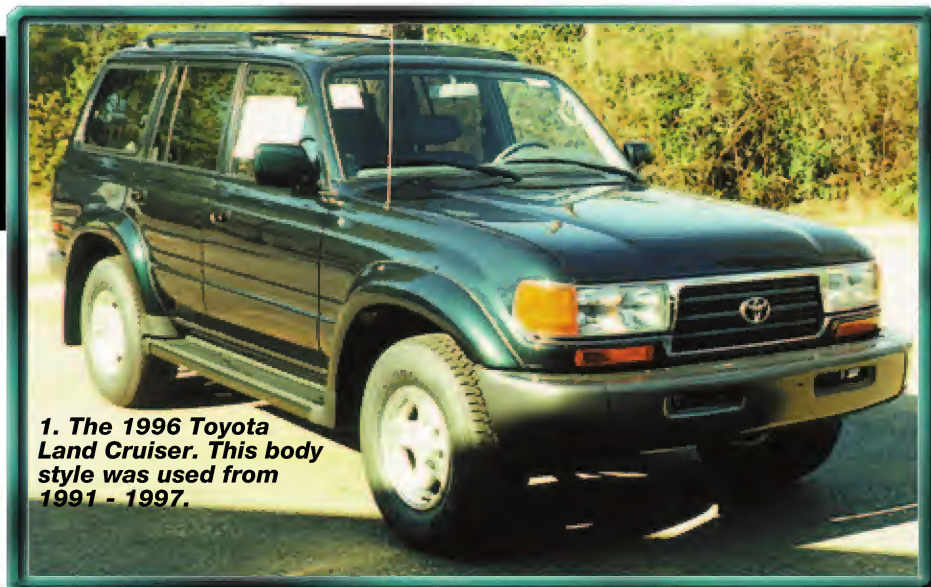
The Land Cruiser is equipped with a pair of sliding windows at the rear of the vehicle. These windows can be opened from the inside by squeezing and pulling a latch that is mounted on the window glass itself. Once the latch has been released, each pane of the window can slide horizontally past the other. A thin vertical plastic strip acts as a weather seal and separates the two panes of glass. The TT-1000 tool (see illustration A.) can be inserted between the two sliding panes of the window and used to release the latch.

To unlock the truck, push the forward pane of glass as far to the front as it will go. This will relieve any tension on the latch. Next, insert a wedge between the outer pane of glass and the vertical plastic strip to gently open a gap just big enough to insert the TT-1000 tool. (See photograph 2.)

Insert the tool between the two panes of glass with the tip pointed downward. Hook the end of the tool into the catch mechanism at the forward edge of the latch. Do not attempt to attack the squeeze portion of the latch that you would use to open the window if you were inside of the vehicle. Instead, slip the tip of the tool under the hook that is actually holding the window closed. (See photograph 3.)

Once the tool is in place, twisting the handle of the tool will lift the hook portion of the latch and allow the window to slide to the rear. (See photograph 4.)

Only slide the widow open far enough



1. The 1996 Toyota Land Cruiser. This body style was used from 1991 - 1997.



2. Carefully wedge the window and insert the tool with the tip pointed downward.



3. Hook the tip of the tool behind the catch and then twist the tool.




4. Twisting the handle of the tool will lift the hook portion of the latch.

so that it will not re-lock when you release the tool. If you attempt to open the window too far with the wedge in place, you will break the window glass. Reach inside the truck to open the rear door.

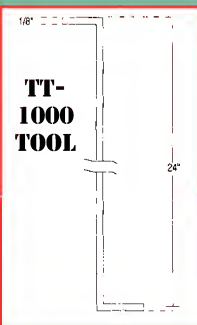
The tricky part of this opening procedure is getting the tip of the tool into the proper position. The sliding windows are usually heavily tinted, which makes the latch mechanism hard to see. I have found that a high-powered flashlight can be a lot

of help, even in broad daylight.

The Lexus '96 and '97 LX-450, is essentially a clone of the Land Cruiser and can be unlocked with the same technique. The '87 - '92 Toyota Van Wagon, is equipped with sliding windows that are identical to those used on the Land Cruiser. The Van Wagon can also be unlocked with this same technique. The Van Wagon was Toyota's first mini-van and was replaced by the Toyota Previa. 

Quick Reference Guide

| | |
|--|---|
| Vehicle: Toyota Land Cruiser 1991-7 | Code Location: Stamped on pass. side door lock. |
| Direction Of Turn: Clockwise, pass. side | Primary Key Blank: Ilco X211, Curtis/Ilco EZ TR44, Silca TOY38R |
| Tool: TT-1000 | Bitting: Ignition 1-8. Doors 1-8 |
| Lock System: 8-cut Toyota plate-tumbler | |
| Code Series: W001-2409 | |





by Bob
Sieveking



1 A 1996
Chevy S-10
pick-up.

1996

Chevrolet S-10 Pick-Up

I had an interesting problem with a 1996 Chevy S-10 pick-up the other day. (See *photograph 1.*) A customer called, stating that her ignition key had suddenly quit working. She had used the key the day before with no problem. This morning the key simply wouldn't turn. I didn't have an easy solution, or even a fair idea of what the problem could be, but I agreed to come out and see what I could do.

It was a cool gray Sunday morning, with a threat of rain, but I filled my coffee bottle and headed out. One of the best things about locksmithing is that you can make money any time of the day or night, any day of the week.

Arriving at the service address, I was greeted by a pleasant young lady that was convinced that I was going to "drill out" the ignition of her new truck. She had called a

number of other shops and was told that she would need a new ignition and a second mortgage to get back on the road.

The first step was to try her key in the ignition. Sure enough, it wouldn't turn. Pulling on the steering wheel to relieve any turning tension on the tiller shaft locking dog had no effect on the problem.

Peering into the keyway with an otoscope, all the wafers seemed to be in order. There were no obvious displaced springs or mangled wafers. The keyway was clean all the way to the bottom. I lubricated the cylinder, and tried the key again. No luck, it wasn't going to work.

A closer inspection of the keyway with the otoscope revealed that the number one wafer was stuck all the way up and the number two wafer was only coming down part way. The remaining wafers, deeper in the keyway, seemed to be working properly. There are nine active wafers in the GM 10-wafer sidebar ignition.



2 Two tools that were made to free stuck wafers in a plug.



3 Remove the tilt wheel control lever.

The decision to drill or finesse the cylinder out of the column had to be faced. I opted to try to finesse the cylinder by picking it. This is not picking according to the normally accepted definition of the term, but picking to free the stuck wafers.

Photograph 2, shows two tools that were made to free stuck wafers in a plug. The scale is included in the photograph so that you can judge the size of the tips. These special picks are scrapers or deburring tools. They are used

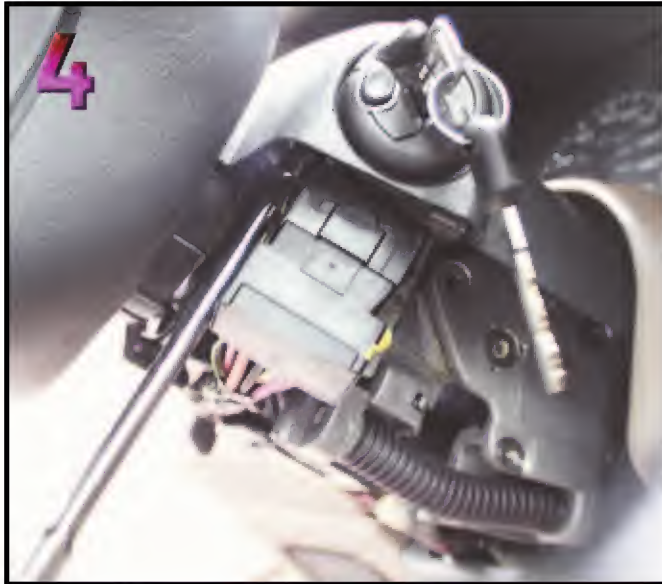
to remove burrs in the plug that might keep a wafer from moving freely. Each is hand filed to shape and should be rather sharp on the edges. They should be used to scrape and remove the deformed portions of the plug, which form the pockets for the wafer tumblers.

These tools also work on pin tumbler cylinders such as Peugeot and Renault small pin type ignitions and Chrysler pin type ignitions. It is like a tiny one toothed file. They can also be used to coax a stubborn wafer or pin down.

I believe that our customer may have forced a different key into the keyway. This deformed the soft white-metal

plug material. After removing the key, the first and second wafers were jammed in the up position. To release a stuck wafer, insert the bottom pictured pick tool into the keyway over the stuck wafer and use the tip to scrape down the sides and across the bottom of the wafer pocket.

The offending plug material will have been pushed toward the rear of the keyway, so scrape at the back side of the front edge of the wafer pocket. With a little work, the wafer will begin to move more freely.

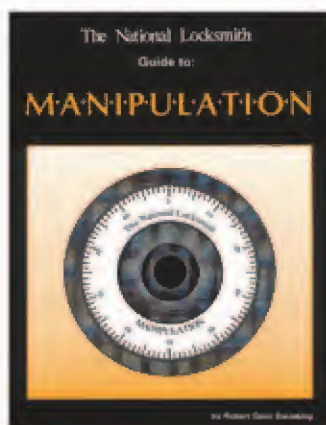


Leave you with the top portion of the shroud attached.



These are male TORX fasteners.

Manipulation Home Study Course

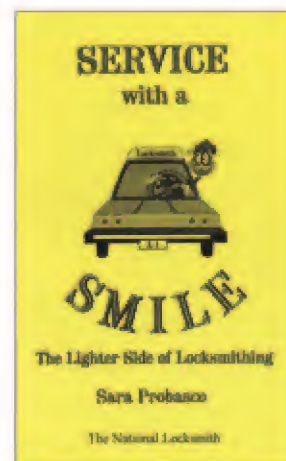


Our home study course guides you on step-by-step process, teaching you everything there is to know about manipulation.

CLICK HERE TO LEARN MORE

#MAN - 1

Service with a Smile



To tickle the funnybone of anyone in a service oriented business.

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#SWS



Use an ice pick or bent tip poke tool to slip the metal bolster ring off.



Two sidebar turning tools.



The sidebar tool properly positioned.



With the ignition plug rotated depress the plug retainer.

Lubricate the plug to wash away any white-metal chips. When you see the wafer drop down, try the key. I worked on this cylinder and was able to free the second wafer, but the first wafer in the keyway would only drop part way. Not enough to allow the key to turn. The sidebar still needed a little coaxing.

To disassemble the column, first remove the tilt wheel control lever as you see in *photograph 3*. Pull out on the handle to disengage it. Remove two exposed screws from the bottom section of the plastic shroud. Unsnap the bottom portion and push it toward the dash to disengage the two plastic hooks, which hold the rear of the bottom shroud to the top portion. Be careful not to break the plastic hooks. This will leave you with the top portion of the shroud attached as you see in *photograph 4*.

Two screws hold the top portion of the shroud in position. The screw on the bottom left side of the column is fairly obvious, but the screw on the right side is hidden. Use a long extension and socket to remove.

These are male TORX fasteners, as you see in *photograph 5*. You will need a TORX socket to remove them.

Though the top portion of the shroud is free, it is designed to be removed only after the ignition is out. The ears of the ignition are larger than the hole in the shroud. If we remove the plastic ears of the ignition, the shroud can be easily removed.

Push the shroud toward the column to expose the backside of the ignition ears. Use an ice pick or bent tip poke tool to slip the metal bolster ring off the back of the ignition ears. (*See photograph 6.*) You will not be able to push the ring completely off the plastic portion of the ears. Thumb pressure behind the plastic ears will easily snap them off.

On the automatic transmission models, the ignition switch has a push button that holds a spring and pin captive. Don't lose the parts during disassembly. Remove the top portion of the shroud and this will expose the ignition housing.

To apply pressure to the sidebar, you will need a special turning tool. Two sidebar turning tools are shown in *photograph 7*. These tools were formed from standard turning tools. The biggest difference is the offset that allows the tool to bypass the top of the ignition as it is inserted beside the ignition plug into the sidebar compartment. The front of the sidebar compartment is open and allows the tool to freely enter. (Some ignitions will not require removal of the ears and shroud to access the sidebar.)

When the tool is properly inserted, it will be positioned as you see in *photograph 8*. The tip of the tool is filed to a chisel point for easier insertion. Turning tension on the tool will put pressure on the sidebar. Because we have a "working key" we will insert the key and put pressure on the sidebar to force it down. The ignition will release and turn. The spring pin from the standard transmission interlock will be released as the ignition is turned. Remove it.

Because this ignition is removed in the "start" position, be careful not to crank the engine. If the clutch safety switch is operating properly, the engine will not crank. The safety prevents the starter from engaging unless the clutch is depressed. If you are working with an automatic transmission model, slip the transmission into reverse. The neutral safety switch will prevent the engine from cranking. Keep your foot on the brake while the transmission is in gear to prevent the car from rolling. Once the ignition is out,

you can return the transmission to the park position.

A third alternative would be to disconnect the battery ground cable to prevent the engine from cranking. With the ignition plug rotated to the start position, depress the plug retainer as you see in *photograph 9*. *Photograph 10*, shows the ignition being removed from the housing.

The ignition must be disassembled for proper repair. Hold the ignition in a proper holding fixture to pry up and remove the spring retainer as you see in *photograph 11*. The Sieveking Products Co. 10w GM Clamp-King fixture is being used here. It clamps and holds the ignition plug without putting pressure on the sidebar. The 10-wafer plug is a larger diameter than the old 6 wafer plugs. Notice the code number "2659" is stamped on the ignition plug. The disassembled ignition plug is shown in *photograph 12*.

To complete the repair, the wafer pockets need to be cleaned to remove any burrs and allow the wafers to move freely. *Photograph 13*, shows a special file for cleaning the tumbler pockets. It is a thin warding file that has been cut in half lengthwise to reduce its width to fit into the tumbler pocket, then thinned with a grinder to slightly less than the thickness of a wafer. The side you see in the photograph is the ground side. The opposite side of the file has teeth. With the teeth toward the front of the plug, slip the tumbler pocket file into the plug through the top where the spring retainer was removed. The file will remove any burrs that might prevent free movement of the wafer. Clean all the wafer pockets, lubricate with spray oil to remove filings, and reassemble the plug with new wafers and springs.

Hold the ignition plug in the service fixture to stake the spring retainer in place. (See *photograph 14*.) Align the lugs on the plug with the ignition ears and snap it on the plug.



The ignition being removed from the housing.



Pry up and remove the spring retainer.



Guide to Motorcycles

For years locksmiths have begged for a comprehensive service manual on motorcycles and its finally here!

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#MOT - 2



The disassembled ignition plug.

(See photograph 15.) Slip the metal bolster ring over the rear of the plug and snap it over the rear of the ears. (See photograph 6.) Test the key in the ignition a few times to insure that the sidebar operates properly, then reassemble the column and install the ignition.

If you take the time to make a tumbler pocket file like the one shown, you will find it very handy in resurrecting most wafer locks. I have used this trick with great success on many foreign locks that ceased working because of salt corrosion, disuse, or abuse.

If we had not had a key for this vehicle and the job was to make a first key, the ignition would have been picked to remove, and the key made to code.

Picking a GM 10 wafer ignition

If you are going to pick the GM 10-wafer ignition, you will need the turning tools shown in photograph 7, and two special cut keys.

The first key is cut from bow to tip at a 1-1/2 depth. Put the key in your code machine and start the cut at position 1 (at the bow). Set the depth at 1-1/2 and cut the key straight to the tip. Cut both sides the same. This is a straight key, with no interruption between cuts.

The second key you will need is a plug removal key. Set the depth to 4, and cut the key straight off the tip. This key is cut straight, with no interruption between cuts. The depth is set to four so it can be inserted into a picked cylinder without disturbing the wafers. You will use this key to turn the picked cylinder.

Caution: the key buzzer switch actuator must be extended as the plug is rotated or you will break the plastic switch. It is not repairable without purchasing a complete switch assembly.

To pick the 10-wafer GM ignition, insert the turning tool into the sidebar compartment and apply light tension. This will place pressure on the sidebar. Insert the 1-1/2 depth "set-up key" into the ignition, and slowly remove it as you continue to apply pressure to the sidebar. Use a diamond pick to "lightly" test the wafers. The front wafers will be the first to pick. Pick the lock using the diamond pick. You will feel the sidebar move into the plug as the turning tool moves forward. Turn the ignition toward the start position only slightly. The sidebar will trap the wafers. Insert the plug removal key to eject the key buzzer switch from the plug and



A special file for cleaning the tumbler pockets.



Stake the spring retainer in place.



Align the lugs on the plug with the ignition ears and snap it on the plug.

rotate the ignition to the removal position. Depress the retainer and remove the ignition.

Good Luck.

TNL



THE CASH STATION

by Mark Gerhardt

NCR 5070

ATM Manufacturer:
National Cash Register (NCR)

ATM Model #:
0210-B370 Class 570

Safe Manufactured by:
Not sure, but may be Meilink.

Safe Model #:
Unknown



Handle Type:

Pull handle incorporated into dial ring.

Handle Location:

Behind dial

Handle Rotation:

N/A

Dial Center to Handle Center:

N/A

Dial Location:

16-3/4" down from top of door. 7-7/8" from right side of door.

Number of Door Locking Bolts:

4

Door Locking Bolt Locations:

Opening edge bolt is 16-3/4" down from top of door. Top bolt is 7-7/8" from right side of door.

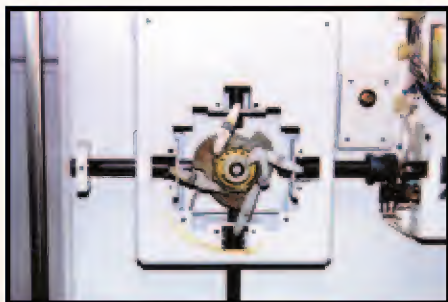
Door Locking Bolt Diameter:

1"

Door Thickness to Bolt Center:

2"





NCR 5070

Door Thickness to Lock Case:
1-5/16"

Door Thickness to Back of Lock:
2-3/4"

Lock Type:
LaGard 2500 Series

Lock Description:
3-wheel key changeable lock.

Lock Case Thickness:
There is no lock case per say. Lock encasement is a part of the door.

Number of Wheels: 3

Driver Location: Rear

Lock Handling: N/A

Drop-In Location: 70

Forbidden Zone: 0 to 20

Lock Opening Procedures:
4xL to first number, 3xR to second number, 2xL to third number, 1xR until dial stops.
Lock Drill Point: 7/8" out from dial center at 70. Align wheel gates at lever fence.

Lock Relock Trigger Type:
None

Lock Relock Trigger Drill Point:
N/A

Lock Notes:
This is a unique lock design that requires special attention when servicing.

External Relock Device Type:
All four locking bolts have relockers. The top bolt and hinge side bolt use a bent wire spring, which drops into a notch in the bolt. The opening edge and bottom bolt use a flat metal guillotine shaped metal bar, which drops into a slot in the bolt preventing retraction.

Top Bolt Relocker:
3-1/2" up from dial center. 1/2" either right or left of dial centerline. This is a wire relocker. Hook and pull towards front of safe.

Hinge (Left) Bolt Relocker:
3-1/2" left of dial center. 1/2" either

above or below dial centerline. This is a wire relocker. Hook and pull towards front of safe.

Bottom Bolt Relocker:
3-1/2" below dial center. 1/2" either left or right of dial centerline. This is a flat bar guillotine shaped relocker. Hook and pull towards front of safe. Relocker is tricky and may require being pulled from either side of the bolt to release.

Open Edge (Right) Relock Bolt:
3-1/2" right of dial center. 1/2" either above or below dial centerline. This is a flat bar guillotine shaped relocker. Hook and pull towards front of safe. Relocker is tricky and may require being pulled from either side of the bolt to release.

Special Notes:
The relockers on this safe are a bugger. If you encounter a door with activated relockers, be patient and diligent.

TECHNITIPS

YEAR-END PRIZES



Grand Prize

Silca Bravo Duplicator



1st Prize

*HPC's 1200PCH
Punch Machine*



2nd Prize

*Mas Hamilton's Auditcon
2100 & Certification Class*



3rd Prize

Curtis 2100 Duplicator



4th Prize

*SDC Magnetic Lock, Keypad
and Exit Switch*



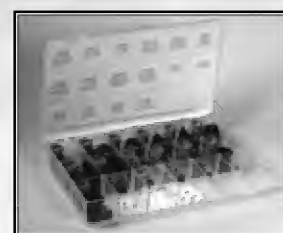
5th Prize

*LaGard "Smart
Guard"®*



6th Prize

\$500 in All Lock Products



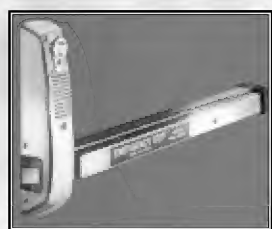
7th Prize

*\$500 in ASP
Auto Locks*



8th Prize

*\$500 in Strattec Auto
Products*



9th Prize

*Arrow Exit Device and
Mounting Kit*



10th Prize

Dewalt Cordless Drill



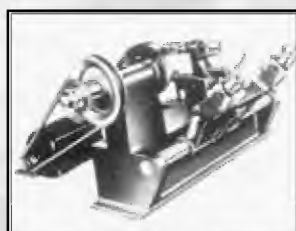
11th Prize

*Detex ECL-8010W
Wetlock®*



12th Prize

*Securitron DK-26 Touchpad
and CPU Board for
Magnetic Lock*



13th Prize

*Foley-Belsaw 200
Key Machine*



14th Prize

*Accu-Mark™ Key
Stamping Machine*



15th Prize

*S&G 6120
Electronic Safe Lock*

These Prizes Awarded Each Month!

- | | |
|---|--|
| <ul style="list-style-type: none"> • BWD Automotive Ford or GM KwiKit • Wedgeco™ Key Extractor Kit • Strattec Racing Jacket • HPC Air Wedge™ • Sargent And Greenleaf 4400 Series Safe Deposit Box Lock • A-1 Security Products • ILCO Key Blanks (100 Blanks) • Keedex "SPIN OUT" Screwdriver | <ul style="list-style-type: none"> • Tech Train Training Video • Sieveking Products Gm E-Z Wheel Puller • Major Manufacturing Products • Slide Lock's "Z" Tool Opening Set • The Sieveking Auto Key Guide • Jet Key Blanks (100 Blanks) • High Tech Tools • LaGard Combo Guard |
|---|--|

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Send a tip on how to do any aspect of locksmithing. Certainly, you have a favorite way of doing something that you would like to share with other locksmiths. Write your tip down and send it to:

*Jake Jakubowski, Technitips Editor,
The National Locksmith
 1533 Burgundy Parkway, Streamwood,
 IL 60107-1861*

*Or send your tips via
 E-mail to: Natlock@aol.com*

Rules & Regulations

Each tip submitted must include your full name, street address (no P.O. Box numbers), city, state, zip code, phone number, fax number or e-mail address.

Every Tip Published Wins

If your tip is published you will win one of the monthly prizes listed. At the end of the year, we choose winners from all the monthly tips published, that will be awarded one of the fabulous year end prizes. All you have to do to win is enter.

Prizes are arranged according to suggested retail price value.



16th Prize

High Tech Tools
2500 Pro Set



17th Prize

Slide Lock's
Master "Z" Tool Set



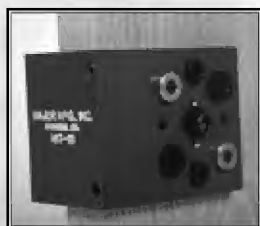
18th Prize

ESP Products Sampler



19th Prize

Baxter JV-1 and
JV-5 Code Books



20th Prize

Major Manufacturing's
HIT-111 Drill Guide



21st Prize

Falle Pick Set From Mark
Bates Associates



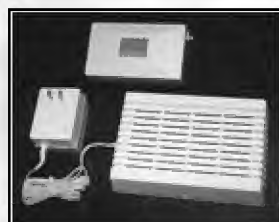
22nd Prize

Sieveking Products
Squeeze Play



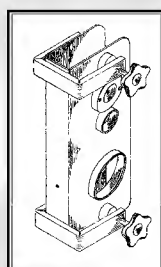
23rd Prize

ABUS Padlock's Marine
Padlock Display



24th Prize

Rodan's AV 100 Heavy
Duty Door Annunciator



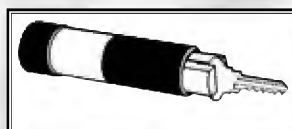
25th Prize

A-1 J-50
Installation Jig



26th Prize

M.A.G. Engineering
Sampler



27th Prize

Framon Impressioning
Handle

Tips
Start
on Next
Page!

**The 15
Minute
Safe
Opening
Technique**

28th Prize

*Book — 15 Minute
Safe Opening
Technique by Jake
Jakubowski*



**BWD Ford or GM
 KwiKit Winner:
 Repining an
 Elevator Switch**

I had to rekey a customer's mortise cylinder, which happened to be an elevator On/Off switch lock. The lock was completely disassembled when handed to me. There were ten springs and ten top pins in this lock. The cylinder had two rows of five chambers and the plug had five chambers that accepted an SC1 key blank.

This was my first time working on this type of lock. I had the idea of using a curved picking shim as an aid for loading the cylinder. This method worked very well:

I held the cylinder so I was looking into the rear of the cylinder. I inserted the plug follower into the cylinder covering the first and second chambers of both rows. (See illustration 1.) I inserted a shim between the plug follower and cylinder covering the first and second chambers of the left row. I loaded the third chamber of the left row with a spring and top pin.

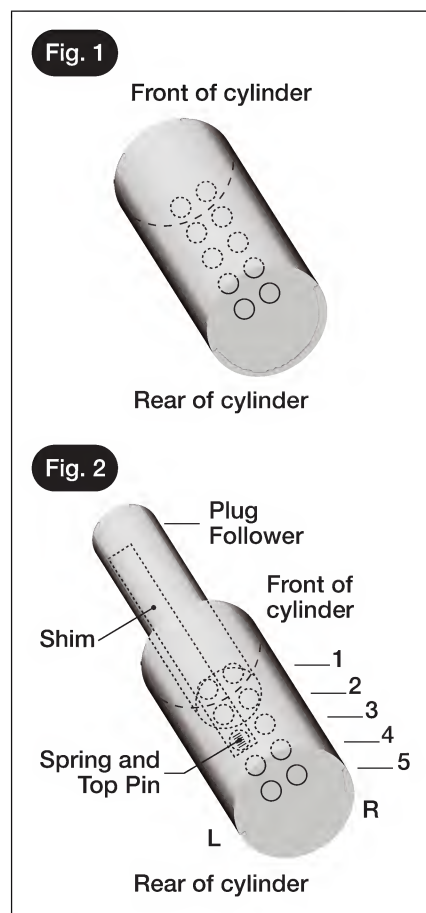


Illustration 1.

A Few Words From Jake...



**by Jake
 Jakubowski**

If you want to win one of the great monthly prizes and qualify for one of the fabulous year-end prizes we give away, you need to take note of the following. For some reason, tipsters are sending me tips with only an e-mail screen name for a name and address; and often E-mail addresses are invalid. When this occurs, everyone at *The National Locksmith* has to try to find out who it was that sent the tip. If you didn't read Mango's Message last month, you need to.

I'm absolutely amazed at the number of tipsters who send me a tip with a business name on it that cannot be located through telephone information, CD business directories, or our own subscriber lists! I'm further astounded at the number of locksmiths that send me a tip that have unlisted personal and business numbers!

The staff at *The National Locksmith*, Greg Mango and I, literally spend hours every month trying to locate a physical address or phone number of an individual who sent a tip so we can send them a Technitip prize. That's not only a waste of time and energy for those involved, it's uncalled for.

Now, I've said time-and-time-again, that if you send me a tip, be sure to include a physical mailing address so we can send you your prize if I published the tip. Right now, I've got dozens of tips that do not have valid physical addresses, phone numbers or - in the case of E-mails - valid e-mail addresses or screen names. This simply makes our job harder.

Every year, through the generosity of our prize contributors, we are able to give away tens of thousands of dollars in prizes. And all you have to do to claim your share is send me a tip along with your first and last name, physical address and telephone number! Remember that last part. Because if you don't supply me that information - even if you do send me a valid E-mail address - you will not get a prize, even if I do print your tip! And just so you know, Post Office Box numbers do not count as a physical address.

I appreciate each person that helps me make this column what it is, and I want to see each of you get the prize you deserve if I print your tip. This is simply to advise each of you that we will not make a concerted effort to get your name and address if you don't want to give it to us. I'll print your tip, but you won't get your prize. It's all up to you.

Y'all heah me, now?

While holding down the top pin with tweezers, I pushed the shim to cover the pin. I loaded the third chamber of the right row and pushed the follower to cover the third chambers. I repeated this procedure for each set of chambers.

*John Marske
 California*



**Wedgeco™ Key Extractor
 Kit Winner:
 Grand Prix Tip**

The 1991-1996 Pontiac Grand Prix trunk locks (two door coupes only) have a solid tailpiece that is connected to the latch via a short cable. This makes forcefully pulling these locks nearly impossible. This is a fact that I learned from experience.

The trick that I use to service these locks is to remove the facecap, drill a

1/16" hole as far to the left of the plug as possible and with a stiff wire or straight dental probe apply pressure on the sidebar while raking the lock. This not only allows access to the trunk, but also results in a reusable lock. All you need to do is replace the facecap and maybe the dust shutter.

The GM part number for this lock with a chrome and black face cap and dust cover is: 1250-5555.

Again, this is a Pontiac only situation and is further restricted to only the two door coupes.

The cable from the lock to the latch can be removed by gently prying/pulling on the top and bottom of the assembly. To reassemble, simply snap back into place.

*Robert Thaut
 Washington*



Strattec Winner:
Stuck Key = Dead Battery

I was called to a 1997 Blazer with the key firmly stuck in the ignition. The ignition would not turn to start and I noticed that the dome light was not on. After checking the headlights and horn, I determined that the battery was dead.

I hooked a jumper battery to the vehicle, turned the ignition, started the car, turned off the ignition and removed the key!

The next day, I called GM Technical Services and was informed that on S/T series trucks, small Blazers and Jimmies (1997 models with automatic transmission and floor mounted shifts only), if the battery is dead and the key is in the ignition, it cannot be removed until the battery is charged.

Keep that in mind if you get a similar call.
*George Steiner
Nevada*



HPC Air Wedge™
Winner:
Chapman Style Security Locks

There are a couple of different automotive security lock manuafactu-

| AXXESS | EZ | ILCO | JET | AXXESS | EZ | ILCO | JET |
|--------|-------|---------|-------|--------|-------|---------|--------|
| 4 | B48 | P1098A | B48 | 61 | Y52 | 997E | Y52 |
| 5 | B50 | P1098C | B50 | 62 | S22 | 010071A | S22,LA |
| 6 | B44 | P1098E | B44 | 63 | COB7 | 1001EH | COB7 |
| 7 | B46 | P1098J | B46 | 64 | Y2 | 999A | Y2 |
| 8 | B49 | S1098B | B49 | 66 | KW1 | 1176 | KW1 |
| 9 | B51 | S1098D | B51 | 67 | WR2 | 1054WB | WR3 |
| 10 | B45 | S1098H | B45 | 68 | SC1 | 1145 | SC1 |
| 11 | B47 | S1098K | B47 | 69 | H1 | 1092 | H1 |
| 12 | B68 | P1099 | B68 | 70 | DE6 | D1054K | DE6 |
| 13 | B76 | P1100 | B76 | 71 | Y1 | 999 | Y1 |
| 14 | B86 | P1106 | B86 | 72 | WK2 | 1175N | WK2 |
| 15 | Y152 | L770CH | Y152 | 73 | IN3 | X1054K | IN3 |
| 16 | RA4 | L970AM | RA4 | 74 | NA25 | R1064E | NA6 |
| 17 | Y155 | P1793 | Y155 | 75 | S68 | 1010N | S68 |
| 18 | Y149 | S1767CH | Y149 | 76 | EA27 | X1014F | EA27 |
| 20 | H60 | L190N | H60 | 77 | AR1 | 1179 | AR1 |
| 21 | H50 | S1167FD | H50 | 78 | B1 | 1098M | B1 |
| 23 | H51 | L167FD | H51 | 79 | SC22 | 1307W | SC22 |
| 26 | HD90 | X181 | HD90 | 80 | IN8 | L1054B | IN8 |
| 27 | HD103 | X214 | HD103 | | Y11 | 01122 | Y11 |
| 30 | TR33 | TR33 | TR33 | 81 | IN35 | 1054DL | IN35 |
| 31 | TR40 | X174 | TR40 | 82 | SC6 | 1307A | SC6 |
| 32 | TR25 | TR26 | TR25 | 83 | T7 | 1141QE | T7 |
| 33 | TR39 | TR39 | TR39 | 84 | XL7 | 1180 | XL7 |
| 35 | TR47 | X217 | TR47 | 85 | NA12 | 1069LB | NA12 |
| 37 | DA25 | DA25 | DA25 | 86 | RU45 | 1011D1 | RU45 |
| 40 | M213 | M213 | M213 | 87 | CO106 | 1003M | HL1 |
| 41 | M217 | X201 | M217 | 88 | L1 | 1004 | L1 |
| 43 | 73VB | 73VB | V30 | 89 | SC8 | 1145E | SC8 |
| 46 | VL6 | VL6 | VL6 | 90 | RU4 | 1011P | RU4 |
| 50 | DC1 | DC1 | DC2 | 91 | AM3 | 1046 | AM3 |
| 51 | MT1 | X176 | MT1 | 92 | BO1 | R1003M | HL2 |
| 52 | B69 | B69 | B69 | 93 | H10 | 1092N | H10 |
| 56 | HY6 | X215 | HY6 | 94 | AR4 | 1179A | AR4 |
| 57 | H4 | 1092V | M4 | 95 | SC4 | 1145A | SC4 |
| 58 | M11 | 1092H | M11 | 96 | WR5 | N1054WB | WR5 |
| 59 | SC9 | A1145E | SC9 | 97 | KW10 | A1176ST | KW10 |
| 60 | M12 | 1092D | M12 | 98 | RU46 | A1011D1 | RU46 |

Illustration 2.

rers, which mount under the dash to secure the vehicle. These usually serve two functions; they deactivate the ignition and lock the hood so it can't be opened. Here on the East Coast they are both often referred to as "Chapman" locks.

I've have encountered two different types of these locking devices. One is the Chapman and it has a tubular lock. The name of the other escapes me, but it uses a Medeco cam lock. To disable either one, I have found the following procedure useful.

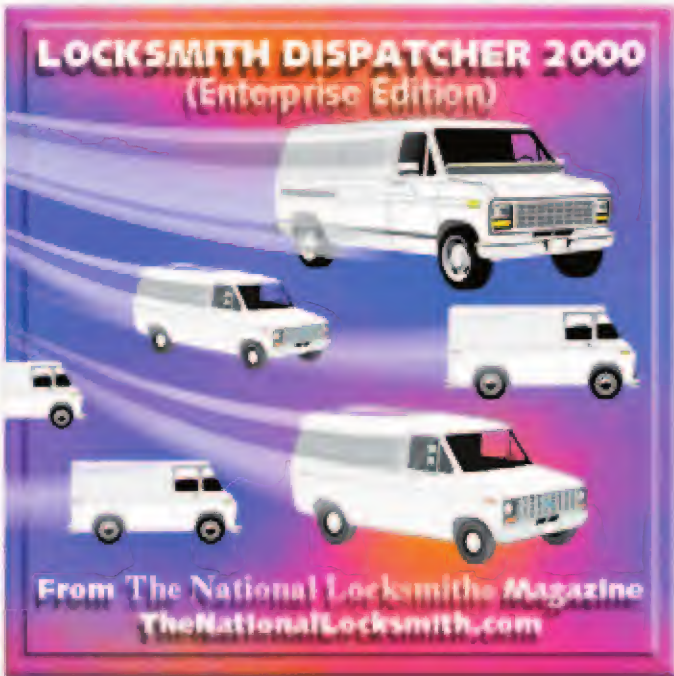
First remove the four screws holding it to the bottom of the dash. If

it is a Chapman, drill a small hole (about 1/8") in the top, 1" back from the face. The earlier models were soft and easy to drill, later ones used harder steel and are a little more difficult to drill.

Once you have the hole completed, use a small screwdriver or probe and depress the locking lug. The lock will pop out to the unlocked position.

If it is the Medeco style lock, there are four rivets holding a top plate on. Remove these by drilling or cutting with a Dremel tool. Once the top is off, tap the cam lock nut with a punch or screwdriver to loosen it and remove

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the cam lock. You can then turn the cam to the unlocked position.

As far as new keys are concerned, keys for the Chapman can be made using standard procedures for tubular keys. The Medeco lock appears to be a restricted keyway and to my knowledge, has to be ordered from the distributor. *Chuck Donnelly, CRL*
New York

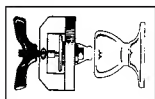


*Sargent & Greenleaf
 Safe Deposit Box Lock
 Winner:
**Axxess Conversion
 Chart***

I'd like to share the enclosed comparative chart, which I recently developed for Axxess Technologies key blanks (*See illustration 2.*) As you may know, this pricey system is designed to assure that novices in major retail chains (K-Mart, Wal-Mart, etc.) can cut more accurate duplicate keys with minimal training.

This will allow you to quickly, and accurately, determine the correct substitute for Axxess blanks, or vice-versa.

Peter P. Shifferli
New York



*A-1 Security Products
 Winner:
Pado Rekey Trick*

I'm sure many of you would agree that rekeying Pado cylinders can cause a loss of hair, not to mention repeated swearing. The main problem is the plug becomes stuck about 3/16" out of the cylinder. This is because the number five driver has dropped into a slot on the end of the cylinder. Another common problem is when the first cut is being changed from a shallow cut to a deep cut.

To service, first duplicate the original bitting from the original 1528 key blank to a six pin Pado blank (1566). You'll probably have to shave a few thousandths off the bottom of the key and sometimes off the top of the blade. Now you have a working key on a 6-pin blank. Next cut the first cut down to whatever depth you prefer.

You will then need to cut away the shaded portion as shown in *illustration 3*. Next, make a probe that is pointed on the end and bent to a right angle about 3/16" from the pointed end. Now you are ready to start rekeying this lock.

Drill out the retainer cap, which appears to be the number six-pin chamber and the retainer should fall out. Now insert your modified 1566 blank. Obviously it no longer works

because the first cut is too deep. In that case, insert the pointed end of your probe to raise the first pin to the shear line. Turn the key 180 degrees and pull out the cylinder to drop the first pin. The reason for turning the cylinder 180 degrees is so the fifth driver will ride on the tip of the key to prevent the fifth driver from dropping. Reinsert the cylinder and turn it back to the upright position and put the retainer pin back in.

Now you need a new retainer cap. Simply take a universal pin, place it on your stamping block and give it a few taps on the pointed end to increase the diameter so that it would have to be driven in the chamber to prevent it from coming out. The only thing left to do is to duplicate the original on the correct blank, then either cut down the first cut on your HPC 1200 or with an ordinary impressioning file. Using this technique I can do both sides of the cylinder in less than 10 minutes.

Adam McKenzie
Alabama

Ilco Key Blanks (100) Winner:



Follow That Plug!

Until 1983, I lived in what was a copper mining town. Since that time, it's become a retirement community. We get seven to ten thousand winter



Illustration 3.

visitors, swelling our population to two or three times its normal size of some 3500 people. These visitors come from all over, Canada, Mexico, Europe and Asian countries as well. Many of these visitors bring their own locks; the likes of which (in many instances) I have never seen. And, they want me to repin or rekey those locks.

Not having the right size plug follower can pose a problem, but since I have about two hundred plug followers in any size I need the problem is short lived. I'm talking about the ubiquitous high-speed drill bit. The shank, or the end of the bit that goes into the chuck serves as the follower. There are enough sizes to accommodate any size pin tumbler lock.

If the shank has been scored by the drill's chuck, it can be de-burred with a light touch from a sander or a flat file. Try to avoid grinding or filing flat places on the shank, as this will put the bit off center when you use it to drill with. Also, avoid pushing the bit too far through the cylinder as you could lose the top pins in the bit's flutes.

If you don't have a large selection of bits on hand, try a few yard sales or swap meets. You can pick up all kinds of used bits in these places. I have found some drill bits that have cost me as little as a nickel or a dime a piece.

Bill Hassenzella
Arizona



*Keedex Spin Out Winner:
**Mortise Cylinder
 Removal Tool***

This tool was made from an old door closer arm and a spacer ring from an ASSA deadbolt.

On the closer arm, (any flat bar stock 3/4 to 1" wide will do) I cut off the end that mounts to the closer just enough to remove the hole and the end with the pivot pin (*See illustration 4.*)

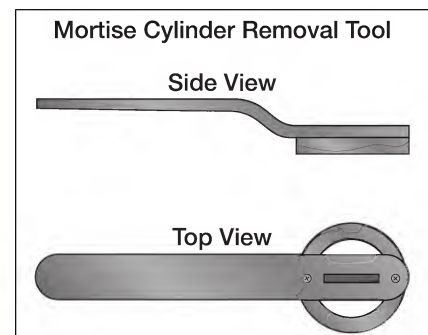


Illustration 4.

Lay the wide end over the spacer ring, center, clamp in place and drill holes through the arm and ring to attach the two together. Countersink the holes in the arm and tap the holes in the ring to accept a suitable screw. Attach the ring to the arm. In the arm, centered over the hole in the ring, cut a slot as shown to accept a large size key head. (I used a US Lock security bow key.) Make the slot just wide enough to allow the key head to pass through.

When finished, round off all edges on the arm (handle) and grind off protruding screws. To remove a stubborn (tight) mortise cylinder, stick the appropriate key blank into the keyway, slide the tool over the head of the key, ring over the cylinder hold the tool against the cylinder and turn. (The lock mounting screws on AR locks should always be loosened a little to take any binding off the cylinder.) The turning torque is tremendous.

I have even had occasions where the cylinder setscrew was damaged and was impossible to get out. With this tool I have forced the cylinder out with the setscrew in place. (Of course I had to replace the cylinder and

sometimes do minor repair to the lock case and replace the setscrew.)

*Rodger Peck
Maryland*



**Tech-Train Training
Video Winner:
Opening A Lumina
Tailgate**

When you encounter a 1992 Chevrolet Lumina van with a tailgate lock that will not turn, you can open the tailgate easily from within the van.

There are two speakers mounted on the tailgate, one on each side. Carefully pry one of them off. They are held on with four metal clips that snap in place. Remove the four screws that hold the radio speaker in place and lift it out of the way. Now you can reach inside to grasp the horizontal rod to open the tailgate.

Remember, there are two rods inside the tailgate, which are connected to a rotating piece behind the lock. Pulling or pushing on either rod will unlock both sides of the tailgate simultaneously. Once the tailgate is open you can get to the screws located on the bottom of the tailgate and all other pertinent bolts or screws to remove the cover and gain access to the lock

*William Allgood
South Carolina*

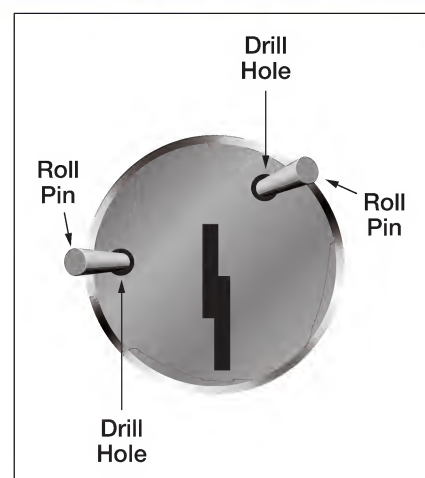


Illustration 5.



**Sieveking Products
GM E-Z Wheel Puller
Winner:
Escort Ignition
Removal**

On 1991 and up Ford Escorts, if you need to remove the ignition for replacement, it is necessary to remove the roll pins that hold the ignition in place. Here's the simplest way that I have found to do the job.

Illustration 5, shows how to locate the approximate bottom of the roll pin and drill two holes through the face of the ignition until you reach the roll



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#TNL - CD1

pin. Then simply take an awl and pry them out. After you have done it once or twice, it is really very quick and easy.

The reason I suggest drilling through the face of the lock is so there is room to manipulate the drill. Otherwise, if you try to drill beside the roll pin, there is very little room to maneuver the drill which not only increases the time it takes to do the job, but it can increase your frustration level accordingly.

*James Raskin
Illinois*



*Major
Manufacturing
Winner:*

Securing Cam Locks on Glass

Many of my clients use 3/4" diameter cam locks on their glass showcases (can't cut a "D" hole in glass) and those locks are often not very secure.

To keep these cam locks from being turned by force with either a screwdriver or uncut key, I use a 3/4" 'O' ring (preferably inside the glass) and a washer between the O ring and the glass tighten the lock nut. You can put a great deal of pressure on the lock nut without danger of breaking the glass.

The same holds true for their wood cabinet doors in which a 1-1/8" mortise cylinder with extended cam is used to secure the door. To keep this cylinder from turning in the mounting hole, obtain a 1-1/8" diameter O ring. Place the O ring over the cylinder on the inside of the door, then tighten the cylinder nut down over the washer. It helps if you can find a steel washer to put between the O ring and the nut. In both cases, lock nut pressure over the O-ring will keep the round cylinder from turning in a round hole and give the customer added security.

*Wynn Kessler
California*



*Slide Lock's "Z" Tool
Opening Set Winner:
**Ace Lock Retainer
Puller***

Here's a simple way to pull the retainer on ACE locks: All you need is a 6/32" screw and knurled nut, and one standard 1/4" by 20 nut. (See illustration 6.)

To use this simple retainer puller, thread the 6/32 nut onto the screw and then place the 1/4x20 nut over



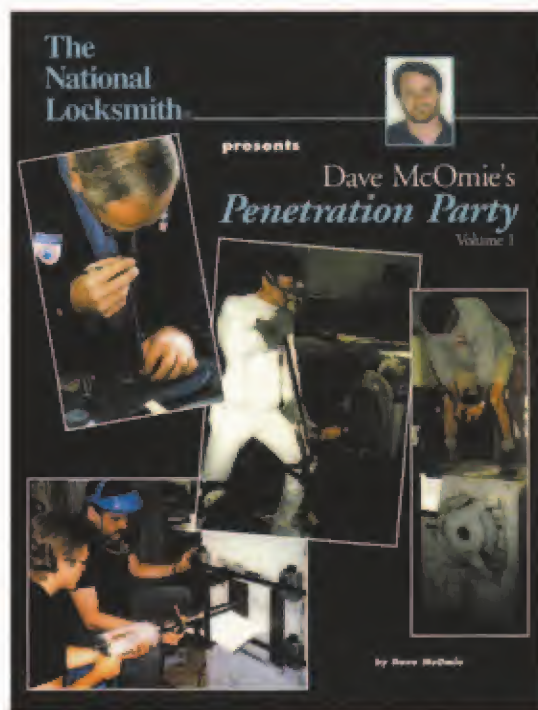
Illustration 6.

the retainer. Screw the 6/32 into the retainer until snug and then tighten the 6/32 nut down until the retainer pulls out of the ACE cylinder.

*Mark Hinkle
Tennessee*

Editors Note: Mark, your tip works, however I can tell you an easier way of removing the ACE retainers. Drill a small hole down the center of the retainer then run a threading tap into the hole. The tap will bottom out and pull the retainer right up.

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#PP - 1



**The Sieveking Auto Key Guide Winner:
 One Less Does the Trick**

A customer brought in a "T" handle from a trunk lock on a 1938 Cadillac, and requested I make a key for it.

I noticed a number stamped on the lock and that the number fell within the code range for older GMs. I cut a key for that particular code which did not operate the lock. Then I remembered reading somewhere that for older autos you should subtract one depth from each cut. I tried that and the key worked very well.

*Gary Follansbee
 California*

Editor's Note: Gary, I had to check with Bob Sieveking on this one, but what you may have done was look up a Curtis code series and cut the key on a Framon or HPC 1200CMB which would not have yielded a working key. The older Curtis codes did not show a number one depth. For instance: the code 8116 in the Curtis book would show cuts as 2-3-3-2-3-4 (there were no ones in these old Curtis codes).

Consequently, by cutting the Curtis code one depth shallower, you originated a working key.



**Jet Key Blanks (100)
 Winner:
 Concrete Fasteners**

Occasionally, we run into a job where we need to fasten hardware to concrete like a strike plate, door closers, or a threshold. This is especially true if you work on commercial storefronts.

I was replacing bottom pivots on a double door front and had to remove the threshold. It was quite an old building and I had to remove the threshold to install the new bottom pivots. This particular threshold had a

hollow steel channel and after installing the pivots and replacing the threshold, it wanted to rise in the center and not lie flat.

To secure, I used concrete screws to fasten it down. I had too large of a bit for the screw, but it was the only one I had. After drilling the hole, I cut a length of flat spring steel to the depth of the hole, inserted the spring steel in the oversized hole and ran the screws in and they pulled down tight.

I learned a new trick on this job, which I'll always remember.

*Merlin Bechtel
 Mississippi*



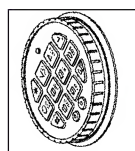
**High Tech Tools
 Winner:
 Goof Ring**

When drilling a wood door for a peephole, if you go all the way through the door, you can splinter the wood on one side or the other.

If that should happen to split the door, you can use a BWD or STRATTEC facecap as a goof ring. Depending on your customer's taste, you can use either a chrome cap or a black one. Just bend in the tabs and insert the peephole through the hole in the cap and insert it in the door. Then finish the installation as you normally would.

*Dan Ewon
 Texas*

Editor's Note: Dan, you can usually avoid splintering by using an 1/8" drill bit to drill a pilot hole all the way through the door. Also, if you need a "Goof Ring" you can buy brass washers in the appropriate sizes from hardware stores or Marine hardware dealers.



**LaGard ComboGard
 Winner:
 Modified handle for
 Mosler GSA**

We had a four-drawer GSA container in the shop that would not open - even with

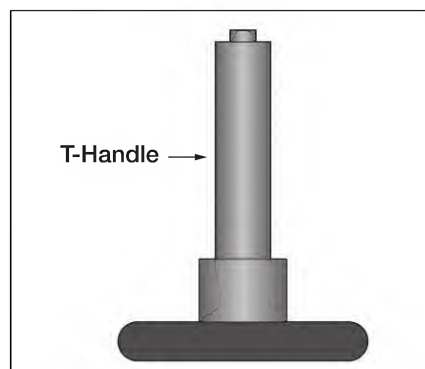


Illustration 7.

the proper combination. The problem turned out to be the L-handle had stripped out from being forced. The handle was hanging down to about the 5 o'clock position rather than 3 o'clock, where it should have been.

After opening the unit and quoting the repairs, we received the go ahead, but found we did not have the proper handle for this container. What we did have was a T-handle. This is how we modified the T-handle to fit the Mosler container. (See illustration 7.)

Since the L-handle had a longer shaft, we used a spindle tube from an S&G 8415 accessory kit, cut the diameter down about 1/32" and cut a piece off 3/4" long to make the inside bushing and stop.

Using two, 1" diameter flat washers that were 1/4" thick (with a 1/2" center hole), we place one outside the drawer in front of the T-handle and bushing and slid the handle through. The second washer went on the inside of the shaft and then we connected the cam and linkage.

The handle worked great and the customer was able to use his GSA container while we ordered the proper part.

*Jim Elkins
 Kuwait*

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#FD - 8

**FORD 8 CUT
 DECODING
 KEY SET**

The **WINTER** Side

"Moving On Up"



by
**Sara
Probasco**

"Wait 'til you see what I bought" Don said as he set a large box on the front counter of our store. Obviously pleased with himself, he was smiling and humming as he took his trusty pocket knife from his pocket and slit the sealing tape that held his treasure prisoner in its carton.

"What is it?" I asked.

"You'll see," was his reply.

With a little prodding from Don, a large, black piece of electronic equipment emerged from its cocoon. "Ta-daaa! Behold, a computerized cash register!" he announced.

"You've got to be kidding," I said. "What do we need with one of those?"

"Just wait. This is going to be the answer to all our accounting problems around here. It will do away with hand-written counter tickets and all the problems of trying to decipher the guys' handwriting."

"Not to mention yours," I muttered.

Ignoring me, Don continued, "It automatically separates taxable sales from non-taxables, figures the sales tax, and tells you the correct change to give the customer. No more guesswork for the guys. No more charging the wrong amount of tax. No more coming up long or short in the register."

"Sounds too good to be true," I said.

"Oh, that's just part of it. With the flick of the fingers, it will give us instant reports, like how much each employee sold each day, how much was material, how much labor, and so forth. And besides that"

"You mean there's more?"

"It will give us instant business reports, so all you have to do is enter the information into the computer accounting program by the year, the month, the week, the day — even by the hour, if that's what you want." Don stopped to breathe. "Well, what do you think? Is this the answer to your prayers, or what?"

How could I express my skepticism in the face of such enthusiasm? I glanced lovingly at our antiquated manual register, acquired as a hand-me-down more than twenty years ago, which was used through three businesses, and was still going strong. It didn't do much except hold money, but it made a cherry little "ding" whenever you opened the cash drawer, and its gray metal case provided the perfect spot for little magnet squares with sayings printed on them. I smiled as my finger touched one that read, "Insanity is hereditary. You get it from your children."

It had gathered dust there for at least twelve years, but it still got a few laughs from our customers. "It's hard to be nostalgic when you can't remember anything," was one new enough to bring a smile to my lips. I patted the old register, remembering how often some old codger would say, "Where in the world did you get that old thing? Why, I remember my dad had one of those, back when...."

My eyes drifted to the smooth, black, plastic case of the computerized register, so streamlined, so new, so cold. Where would be the humor in that? No place to attach my magnets. And what reminiscences could such a machine possibly trigger? Still, there was a sort of excitement to its lines, and with the new millennium on the horizon, maybe it was time to retire the old gray register and move on up. I sighed.

"Okay," I said to Don as I squared my shoulders and confronted the new, sleek Cyclopes with the black glass eye, "Get out the instruction manual, and let's see what this baby can do."

The programming directions had obviously been devised by an evil Egyptian for people living in Outer Mongolia to

translate into English. The only things that made sense didn't work. It seemed four or five steps would have to be taken on the machine for the simplest of operations, when performed manually.

Finally, I threw up my hands in frustration. "We are never going to be able to convert to this. It would take weeks to learn all these codes."

"Oh, it can't be all that bad," Don said. "Have you figured out how to void mistakes?"

"Yes, but...."

"All right, then, let's move it out front and give it a try."

"All I can say is, you're a lot braver than I am."

"Okay, crew," Don called to the guys, "gather 'round. You're about to have a quick lesson in computerized cash registers, so listen up."

Eager to see the new equipment



"One of our workers is trying to crack your safe right now..."

at work, they huddled around the front counter.

“Now, let’s see,” Don said, reading over the page I had typed out for him, “Rickie, you are clerk number 1000, Ray is 2000....” He went on, giving each of us our number. “When you start to ring up a sale, the first thing you do is punch in your number and then hit “clerk.” That gets you going. Next, you put in the amount of an item and then hit the letter key that identifies it - like “K” for keys, “P” for padlocks, “L” for taxable labor, and so on. We’ll post the list on the counter by the register, so you don’t have to remember.

“Sara has already programmed in taxable and non-taxable merchandise and labor, so if you hit the right keys the tax will be automatically added, or not, as needed. When you’re through, hit “Subtotal,” enter if the customer paid by cash, check, or credit card and how much, hit “Total,” and it tells you how much change to give back. A piece of cake, right?” Don beamed as his eyes panned the guys’ faces.

One was scratching his head in puzzlement. Another was nervously pulling on his bottom lip. The third had taken a couple of steps backwards as if contemplating a quick escape. Only Rickie was eagerly leaning forward, peering at the machine’s digital read-out.

Don moved closer, glad to have at least one who seemed interested. “Did you get all that, Rickie?”

“Huh? Oh, yeah, I guess.” He leaned closer and pointed to the screen. “Say, did you know this surface has a scratch in it?”

Over the next three days working with the new register, the combined team managed to void two hundred and six transactions (one of which involved the “sale” of four thousand duplicated keys), misplace thirteen dollars and seventy-three cents, and ring up nearly nine hundred dollars in taxable labor which projected a tax bill of over two hundred dollars. No daily report balanced, despite the machine’s insistence in the accuracy of its “Manager’s Daily Summary,” no breakdown of taxable versus nontaxable sales could be brought forth on the summary to verify taxes owed, making me break out in hives at the mere thought of being called upon to explain one of those daily

rolls of register tape to a tax auditor, and Don was routinely cursing the machine and threatening to throw it in the dumpster.

When I arrived at the store the next morning, everything was suspiciously quiet for the first time in nearly a week. No one was shouting. No one was running about frantically seeking help. No impatient customers were waiting in a slow-moving line. No new computerized cash register was sitting on the counter. Whoa! Wait a minute!

The old, gray, metal, manual cash register with its little magnetic witticisms emitted a cheery “ding,” as Rickie closed its drawer, completing a sale. Rickie looked up at me, grinning happily for the first time in days.

“I thought you sold it to a little old lady,” I said when I reached Don’s office.

“So I changed my mind, all right?” Don tipped back and put his feet on the desk.

“Well, sure, but...”

“You know, I’ve been thinking. Just because the rest of the world has gone crazy over electronics doesn’t mean we have to.”

“Okay. So, what did you do with the monster?”

“I sold it to the little old lady, as is, for what I’d quoted her on the old one. She was tickled pink.”

“Well, I guess she was! Have you lost your mind? That new register cost us at least four times what you were asking for the old one, even at ‘antique’ prices. Does it occur to you that we’re going backwards here?”

“Well, sometimes a person has to evaluate the true worth of things. And what may appear on the surface to be a step back, can actually be a move up. Besides, letting her have it at that price makes me feel better about the instruction manual.” The old, familiar twinkle was back in his eyes.

“You mean the fact that she’ll discover it doesn’t make much sense?”

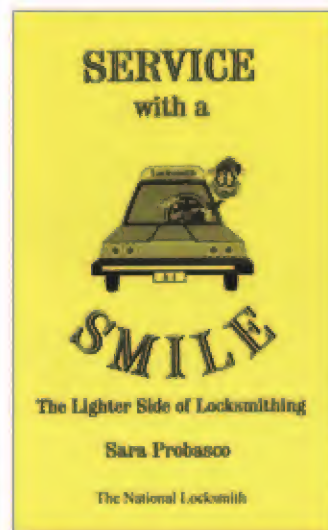
“Worse than that.”

Following Don’s sheepish glance at the shredder basket, I saw a pile of recently created confetti.

“I mean the fact that she won’t discover it at all.”

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#SWS

THRU THE KEYHOLE

A Peek at Movers & Shakers in the Industry

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Super Lube® Launches Pricing Initiative for Lock Industry

When Synco Chemical Corporation founded the Super Lube® line of highly efficient lubricants in 1980, it was decided that quality and consistency must always be paramount. Eighteen years later, the company has remained true to that commitment. Synco does extensive quality control testing both on-site at their Bohemia, NY headquarters, and at off-site laboratories. Their consistent quality has earned Synco a coveted Q1 rating from the Ford Motor Company, as a preferred vendor. All Super Lube® products conform to ISO standards.

Now this same high quality is available to lock professionals. Synco recently announced the availability of Super Lube® products packaged specifically to accommodate the needs of the lock industry. This is the same product currently used by many OEMs. Super Lube® is available in various sizes to meet specific applications including an industrial size for locksmiths and other industry professionals. It is available in grease, oil and aerosol form. While Super Lube® delivers tough, long-lasting lubrication, it also delivers something else: favorable profit margins for dealers.

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Super Lube® Aerosol: A multi-purpose, PTFE-based, non-toxic, synthetic lubricant, which disperses and penetrates, while lubricating and loosening rust and dirt. It offers continuous protection by providing a grease-film barrier that defends against oxidation and helps extend product life, while reducing maintenance.

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#TIPS - 2



Take Charge of Your Time

by Ted Tate

For people in their own business, time is often the enemy. Have you ever wished you could squeeze a few hours in your day just to get more done? What would you do with it?

Unfortunately I can't change time, but I do have some ideas from my time management class I teach at a local college. Many students claim these strategies have allowed them to be at least 20 to 25 percent more efficient. In an eight hour work day that's as much as two extra hours! Here's how:

Write It Down

Have a written list of the things you need to do and cross out items as you accomplish them. Starting out your day with everything in your head is bound to cause confusion.

Set Your Priorities

Prioritize your list. Do you have any friends who run around all day rushing from one task to the next, somewhat confused about what to do next? That's often because they treat everything that comes along as equally important. They don't separate what has to be done from what should be done or from what would be nice to do.

Not everything we do is equally important. For instance, buying gasoline for the car is a "B" priority unless your gauge is on empty, then it becomes an "A".

Do the Important Things First

Focus on doing the "A" list first, never mind the others. Some people procrastinate doing the "A" list because those are frequently the most complex and sometimes unpleasant tasks. Fight the urge to switch to "B" or "C" tasks.

Setting Priorities is Simple as ABC!

"A" means something you must do, a very important task.

"B" means something you should do but if you must it can be postponed.

"C" means something nice to do but not necessary.

Clarify Priorities by Asking These Questions

Why am I doing this?

How does this relate to my goals and objectives?

Is this really important?

Can I delegate this?

Don't Leave Tasks Unfinished

Finish one task completely before you go to the next. When you put something incomplete aside, it remains in your mind causing additional clutter, which contributes to a sense of confusion. When you pick up the partially completed project you have to rethink it out and decide what steps

need to be taken all over again. Doing little bits of a whole series of tasks creates an unnecessary waste of time. If you complete a task it can be forgotten allowing your mind to focus on the next task.

In addition to writing out your list of daily to-do's, break up your larger, more complicated tasks into a series of smaller steps. One reason people procrastinate on bigger tasks is the feeling of being overwhelmed. Doing a big job in a series of smaller stages makes it much easier to get started.

Set a Timetable

Set realistic deadlines for doing your important tasks. Schedule when you will do them on your calendar. Putting time limits on yourself insures you will tend to do them.

Tyranny of the Urgent

What about interruptions that ruin our schedules? There always seems to be one thing or another calling out for our attention. People sticking their head in the door to ask, "I need your help with..." or perhaps phone calls from customers, friends or relatives. There are a thousand little daily interruptions that can steal our time. In truth no one can steal our time unless we allow them to.

Being Overwhelmed

Be able to say "No." Eliminate lower priority items from your schedule and learn to delegate or hire out tasks when appropriate.

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Crisis Management

Don't allow other people to create a crisis, then expect you to resolve it. Be able to say "No" and mean it.

Not every crisis needs immediate attention. If possible, schedule a time to handle and continue on with your planned tasks. Set time aside to anticipate and plan for potential problems and solutions. Keep your schedule flexible.

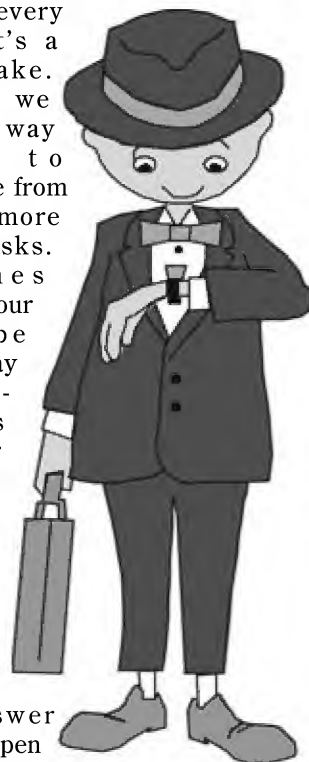
Many people will respond immediately to every call, every request. It's a fatal mistake. Sometimes we react this way simply to procrastinate from doing the more difficult tasks. Sometimes because of our need to be liked we may find ourselves helping others instead of doing our own jobs. We tell ourselves "It'll only take a minute"

so we answer the phone, open the mail, tell a joke or two around the water cooler, write out a shopping list, take personal phone calls, taking extra time for all sorts of tasks with no real pay-off. At the end of the day we feel frustrated to find we've gotten little if anything really accomplished.

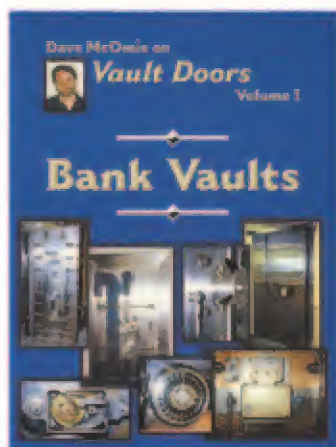
Usually, most requests for out time can be deferred until we finish a goal. However, we lose sight of our goals because few will take time to write out an organized list of goals accompanied by an organized, prioritized list of to-do's to accomplish them.

Over simplified, good time management requires thinking out your goals in advance, deciding how you will accomplish them and then not allowing the trivial to get in the way.

Ted Tate can be reached
at Tate & Associates:
www.trainingexpert.com



Dave McOmie on Vault Doors Vol. 1 & 2



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#VD - 1, VD - 2

BUSINESS BRIEFS

Silver Sales Opens Eastern Facility

Silver Sales has opened an East Coast stocking facility in Ft. Myers, Florida. "The new location will help serve the locksmith customers throughout the East," said Bill Silver, vice president of the company. In addition to the Florida location, Silver Sales has a stocking warehouse in Plano, Texas.

Both facilities can be reached through the company's toll-free number, 800-258-5625, or through the company's web site at www.silversalesusa.com.

Schwab Building for the Future

With the new millennium rapidly approaching, Schwab Corp. made a firm commitment toward securing its future recently. Through a \$7 million master plan, Schwab expanded its manufacturing facility in Cannelton, IN and built a brand new, larger headquarters in Lafayette, IN to house its corporate offices.



its stock capacity and, at the same time, have ample space for additional growth.

For more information call: Phone: 800-847-5625; Fax: 800-878-6400;

E-mail: SECLOCK@IX.NETCOM.COM; Web: <http://www.seclock.com>.

DynaLock Expands and Adds Reps

DynaLock Corporation is adding a 6,000 square foot addition to its present headquarters/manufacturing operation. The expanded Forestville, Connecticut facility will allow for more efficient processing of orders and increase stocking capacity. Expected completion date is August 1999.

The company has also appointed N.J. Stevens Co., Inc. as Sales Representatives in Northern New York and Paul J. Polke Company as sales representatives for metro New York, New Jersey and Eastern Pennsylvania.

Access Hardware Offers GardLok, T3 and Vandlgard

Access Hardware Supply is carrying the new GardLok 300, Trilogy T3 and Schlage Vandlgard products. The GardLok is engineered to easily retrofit to a narrow stile aluminum door with an Adams Rite MS1850 series swing-bolt or compatible locksets.

The Trilogy T3 has a plethora of special features that include: 300 user codes, 3-6 digit codes, a real time clock, 150 scheduled events, a 1600 event log, and ADA compliant leverset clutch design.

The Vandlgard is designed to prevent damage to internal lock components caused by excessive force from individuals kicking, hitting or standing on the lever to gain access.

For more information call: 800-348-2263; Fax: 800-435-8233, or circle 317 on Rapid Reply.

Allsafe Company Appointment

Sharleen Reidy has joined Allsafe Company's Buffalo office as a customer service representative/inside salesperson. In her new role, Reidy will assume responsibility for business development, working closely with dealers to solicit new business, provide quotations and resolve any customer related concern issues. Reidy most recently held the position of manager of product assurance with Diebold, Inc

Aiphone Appoints Executive Vice President of Marketing

Aiphone Intercom Systems has appointed Harry Quanz as Executive Vice President of Marketing. Quanz is responsible for overseeing all marketing and promotional efforts, including facilitating new market research and development, as well as residential sales development.

For more information call: (425) 455-0510; Fax: (425) 455-0510.

Delt-Rex

Irving Saphirstein, recognized as the originator of the electromagnetic lock, announces the formation of his new company, Delt-Rex Door Controls, LLC.

Delt-Rex designs and manufactures innovative and reliable code conforming door control systems, offering a complete line of push plate controls, exit releases, power supplies and electromagnetic

locks. All Delt-Rex systems address ADA regulations.

For more information call: 860-233-8201; Fax 860-233-8224.

Auth-Florence Moves

The Auth-Florence Manufacturing Co. has moved its headquarters and manufacturing operations into a new 85,000-square-foot facility in Glendale Heights, IL. The company has consolidated all fabrication, assembly, warehousing and shipping into a single location.

For more information call: 800-275-1747; Fax: 630-545-1896; Web: www.auth-florence.com.

SDC Introduces New Catalog and More

SDC introduces 13 new products with the new 1999 catalog and redesigned Web site. New products include a 1-8 door / 4000 user access control, delayed egress systems, break glass door release, electric cylindrical and unit locks, electric strikes and access control power supplies with Class 2 outputs. SDC is the largest independently



Abloy EL410 and EL411 Approved by UL

The Abloy Solenoid Lock Cases EL410 and EL411 for narrow stile doors have received UL approval according to UL1034. For more information, circle 316 on Rapid Reply.

Security Lock Distributors Expands

After only three years in its present facility, Security Lock has moved to a larger building in Florida with nearly 100% increase in space. The company-owned structure enables the well-known distributor to greatly increase



owned access hardware manufacturer in the U.S. Visit the redesigned web site containing access controls and lock hardware at www.sdcsecurity.com or e-mail us at: marketing@sdsecurity.com. Circle 318 on Rapid Reply. 

Time Lock Basics

Part 1

by Charles Stephenson, CPS

In 1996 Ilco Unican Corp. acquired Relhor SA of La Chaux-de-Fonds, Switzerland. Relhor has been recognized for years as a leader in precision time lock movements. Relhor's reputation is of no surprise when you consider that the company resides in the heart of the watch and clock making geography. La Chaux-de-Fonds is the highest (altitude) city in Europe and lies in the Jura Mountains in Northwestern Switzerland.

This article will concentrate solely on Ilco Unican and Relhor products, but most of the information applies throughout the time lock segment of our industry. By referring to the photographs and illustration you will better understand the text.

A traditional time lock is comprised of a case, a locking mechanism and one or

more industrial timers, and has evolved since James Sargent patented it in 1865 and 1867. The time lock is independent of the safe lock(s) and has no outside control. The movements control the functioning of the time lock and its locking mechanism. The three-movement time lock case in *photograph 1*, is Ilco Unicans' new 64 series die cast case. You will notice that it is non-handed.

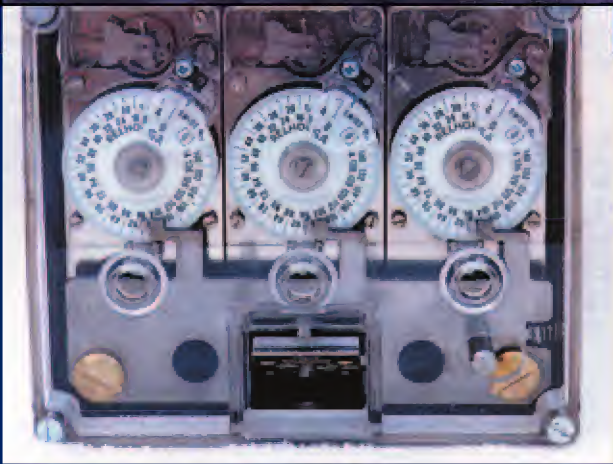
A few terms and their definitions are necessary to better understand this text, future articles and general conversation surrounding time locks. Parts locations are indicated in the exploded view in *Illustration A*.

The *Actuator/Control Button* (F) is that part of the locking mechanism

which is exposed on the front of the case allowing it to be easily depressed, turned or pushed in order to move the snubber to its' locked position.

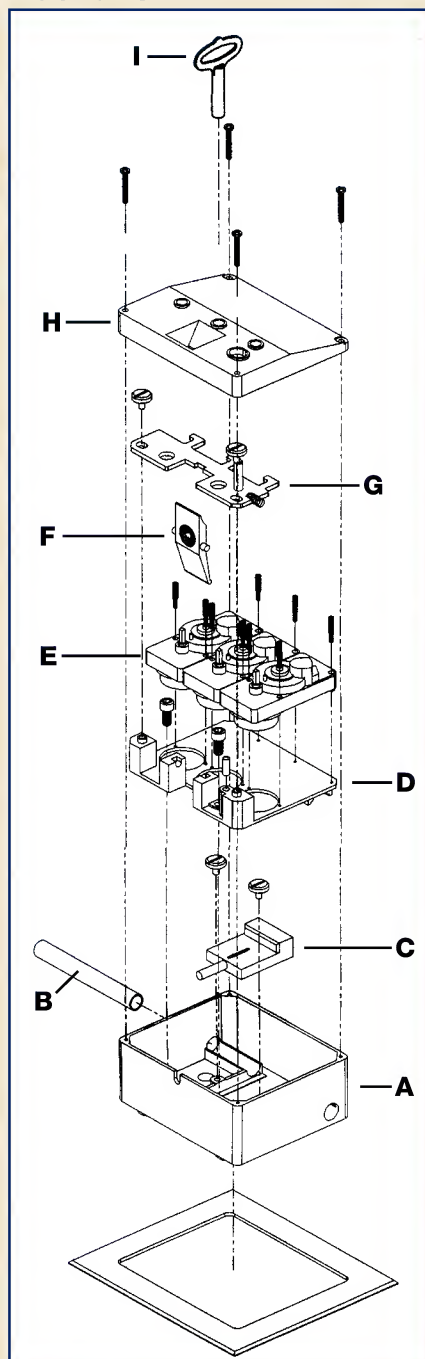
The *Carrier/Trigger* (G) blocks the actuator once it is activated and prevents it from returning to the unlocked position until the time has wound down on a movement.

The *Case* (A) may be formed from plastic or more commonly cast from Zamac. The case houses the snubber, actuator, mounting table, movements,



1. Series 64 with three standard mechanical movements.

Illustration A



carrier and accommodates the attachment of the front cover. Integral to the casting of the case is the snubber bar channel.

The *Front Cover* (H) attaches to the case and provides both protection to the parts and minimizes the exposure to outside contamination such as dust.

Mechatronic is a reference to mechanical/electronic devices, which are also referred to as electromechanical.

The *Mounting Table* (D) secures the movements to allow the winding of the movements and movement of the carrier to the locked and unlocked positions without changing its predetermined position.

The *Movements* (E) are industrial grade timers that are available in mechanical or mechatronic design.

The *Snubber/Locking Bolt* (C) is the cast or machined device, which moves to block the movement of the snubber bar. The snubber most generally is moved to the locked position by a force applied via the actuator and unlocks by gravity once the carriage unblocks the actuator.

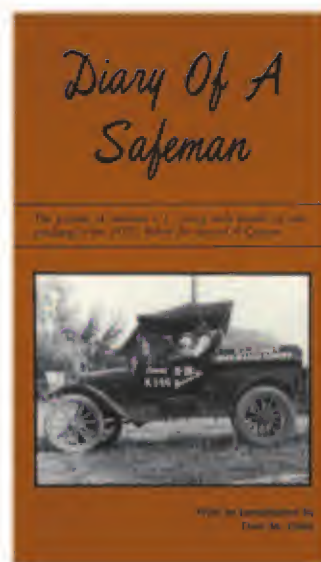
The *Snubber Bar* (B) is a bar attached to the linkage bar between two combination locks or directly to the bolt works of the safe or vault door. The snubber bar travels in a hole (channel) through the time lock case when the time lock is in its' unlocked mode.

The *Winding Key* (I) is used to wind time onto the movements. Electronic time movements utilize the key to set the program or unlocking time. The winding key is used to turn mechatronic movements on and prep them for programming.

A time lock contains two or three movements mounted onto a mounting table and installed inside of a time lock case. This case, with the accompanying snubber (blocking mechanism), is mounted onto a safe or vault door and assures that the bolt works cannot be retracted until the predetermined number of hours have lapsed. (See photograph 2.) This is accomplished by winding a number of hours into each movement.

The development of two and three movement time locks is due to the principle of redundancy. In the event one movement fails, there is one or two more in backup to assure a proper opening. For this reason it is crucial that the correct number of hours are wound into each movement via the winding key

Diary Of A Safeman

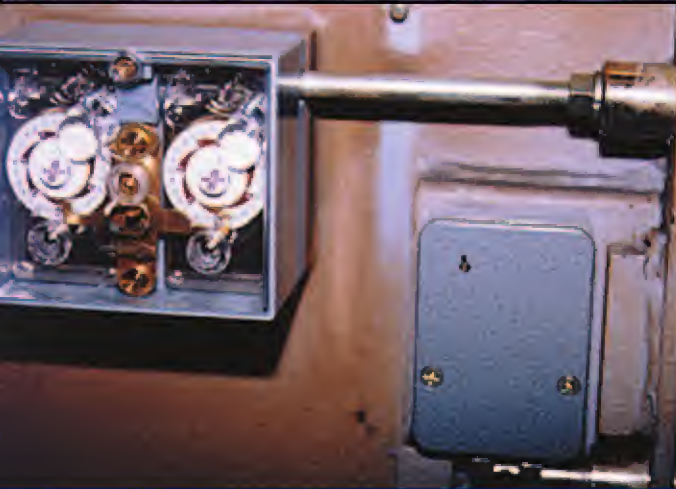


This book is a real gem...the private safe diary of old time safecracker C.L. Corey.

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#DIARY



2. Two-movement time lock mounted on a safe door.

and stem of the movement itself.

Once the time is calculated (hours until the next desired opening) the movements are wound, the snubber is activated, the door closed and the bolts extended. The door is now secure until the number of hours set in the time lock has expired and the snubber unblocks the snubber bar. The snubber bar is a 1/2" diameter bar that is attached to the bolt works and aligns with the channel (hole) through the back of the time lock case. When the actuator is pressed the snubber is raised to block the channel preventing the snubber bar from traveling through the channel and blocking the bolt works from retracting.

Once the time on the movement has expired the display wheel rotates and the unlocking pin pushes the carrier aside. The carrier releases the actuator allowing the snubber to fall (by gravity) and open the channel to allow the snubber bar to travel freely.

Measurements have become somewhat standard in size so that movements and cases manufactured by different companies are interchangeable. The movements measure approximately 80.1mm (3.2") long by 38.6mm wide (1.5") by 41.1mm (1.6") thick. The thickness is measured from atop the winding stem to the bottom of the main spring case, and is the greater thickness.

The time lock housing consists of the case that mounts directly onto the safe or vault door and its front cover. Inside the base is the snubber and a spring-loaded rod connecting directly to it. Some cases may contain a position switch, which is wired to an indicator, signaling when the snubber is in the locked or unlocked position.

The mounting table, holding the

time move-ments, attaches inside the case. The mounting table provides for a carrier to be mounted in an alignment so as to interact with the actuator. This interaction provides for locking or unlocking of the time lock.

The carrier holds the actuator in the locked position until time has wound down on one or more movements. The carrier is then pushed aside (into its' unlocked position) and allows the snubber to fall (by gravity) and open the channel. The

carrier is spring loaded to provide automatic locking whenever time is wound into the movements and the actuator is pressed. This is the reason the rod connected to the snubber is spring loaded.

The Quorum (mechatronic time lock movement), which we will discuss later, measures 76.2mm (3.0") long by 38.5mm (1.5") wide by 34.7mm (1.4") thick. As you can see these overall dimensions are slightly smaller than its mechanical cousins.

A few more definitions are in order to prepare us before looking at the movements themselves.

An *Accelerated Action Movement* allows the power from the mainspring (at the 0 hour) to accelerate the rotation of the display wheel. This rapid rotation moves the unlocking pin rapidly and with full power so as to force the carrier to the unlocked position quickly.

The *Display Wheel* (dial wheel) is the large gear on the front of the movement on which the numbers for the amount of hours are shown.

The *Escapement* is the device, which controls the speed of the gear train and permits the first wheel to rotate once every 24 hours.

The *Gear Train* is a series of different size gears through which energy is transferred from the mainspring to the unlocking pin. This transferred is regulated by the escapement. There are usually 5 gears in the gear train.

Jewels are used as bearings for the mounting points of the gears. The movement will employ 3 to 13 jewels in its design.

The *Main Spring* is a long flat ribbon of spring steel that stores the

energy through the winding process and in turn releases that energy gradually. The escapement controls the release of the stored energy.

The *Main Spring Barrel* is the outer housing of the mainspring and made from brass or plastic. The barrel is located on the bottom of the bottom plate.

The *Plates* (top and bottom) are held in position by pillars (standoffs) and provide a place for the components of the movement to be mounted and held in permanent position.

Reserve Power is the energy stored in the mainspring once the mainspring has wound down to its final stopping position. The reserve power allows the movement to have the strength to open the time lock and to start as soon as time is first wound into it.

A *Reset Movement* allows the user to wind time into the movement and then reverse the direction of winding (back winding) to reduce the time. A clutch on the third wheel allows back winding without damage to the movements' gears.

A *Standard Movement* is without extra features such as accelerated action and reset ability. This movement begins pushing the carrier at the 0 hour and will take several minutes to complete the opening process.

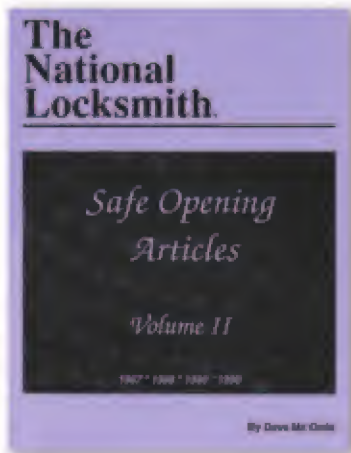
The *Unlocking Pin* is mounted on the display wheel between the 90 and 100 hour mark.

The *Winding Arbor Assembly* consists of the winding arbor (mainspring arbor), the winding pinion and the first wheel. During winding the winding pinion turns the dial wheel (display wheel) to which the display or dial is attached and winds the mainspring.

Relhor manufactures five types of movements for North American sales. (See photograph 3.) There are others that may be special ordered. The five are: the standard non-reset AR152-0 that can be identified by the 0 inside of a box on the face of the hour dial. This identification appears between the hours of 0 and 144 and under the "Swiss Made" label.

The standard movement with reset (AR152-1) will have a 1 inside of a box while the accelerated action movement with reset (AR165-2) has each 24 hour period marked by a number inside of the hour ring on the display wheel. Each number corresponds to the number of days in equivalent hours (i.e. 24 hours = 1, 72 hours = 3, 120 hours = 5, etc.).

Safe Opening Articles



Dave McOmie's original articles from when he first started writing for The National Locksmith are reprinted in this book.

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#SA - 2



3. Relhor time lock movements.

The 120 hour movement is Diebold time lock dedicated (AR165-4).

The newest movement to the Relhor family is the 7-day mechatronic movement with audit trail (AR169).

The first five movements are standard at 144 hours maximum setting and the AR169 is available in either 168 hours (7 days) or 244 hours. The 244-hour version is exclusive to the European market.

There are other ways to identify these movements. A reset movement will have a clutch on the under side of the second wheel. This wheel can easily be spotted by turning a movement onto its side so you can view it from the left. The wheel nearest the side of the bottom plate and located about midway between the top and bottom of the bottom plate is the one you are looking for. Next, turn the movement onto its other side and inspect underneath the dial itself. An accelerated action movement will have a mechanism mounted underneath the display wheel and attached to the top plate.

Take special note of another difference between the Diebold dedicated movement and the other types. On the dial of each movement there is an unlocking pin located at the 93-hour mark except on the Diebold dial. On the Diebold dial the unlocking pin is located at the 96-hour mark. This means that a Diebold (120 hours) movement would contact the carrier sooner in a standard time lock box than other movements. The carrier is configured differently in a Diebold case than in others. The AR169 overcomes this difference by adding an adapter on the unlocking pin to advance the point of contact.

The AR169 mechatronic time lock movement is the first movement to offer the user an audit trail combined with the ease and reliability of

electronics. The incorporation of quartz technology assures "to the second openings." The AR169 is used in conjunction with the AS248 controller. This resembles a TV remote control. Together the controller and the movement are named the Quorum.

The controller (AS248) offers two levels of authority, one user code and one master code. Upon turning the unit on and entering the master code, you may choose from the time lock, time, date, code or audit icons. The user is limited to setting the time lock feature only. If the time lock feature is chosen the operator enters their desired next opening time and date and the Quorum calculates this in hours and minutes.

By "winding" the movement with a standard winding key, then pressing the enter button on the controller, you have uploaded the next time lock opening. The movement will report back to the controller and verification of the programming displayed on the LCD of the controller. This transfer of information is accomplished through an infrared beam.

Taking an audit is as easy as choosing the audit icon, selecting the AR169 movement, turning the movement on with a winding key and downloading the 100 events. The infrared receiver connected to your printer will receive the information and print a complete audit for your inspection. If an audit of the 200 events stored in the AS248 controller is needed, you only need to select AS248 under the audit icon and transfer to the printer.

Join me in Time Lock Basics Part II, where we will examine the next generation of time locks. Both the Quorum and the Misal 3000 will be introduced and the features reviewed.

TNL

KEY CODES

Audi Series

AH1-AH854

The HPC 1200CMB and 1200PCH code cards for this code series are between pages 84-87.

Manufacturer: Audi
Code Series: AH1 - AH854

Key Blanks

Curtis: V35
Iico: X139
Iico EZ: V35
Silca: HU49

Number of Cuts: 7-10

M.A.C.S.: 3

Key Gauged: Shoulder

Center of First Cut: .100

Cut to Cut Spacings: Varies.
Cuts 2, 5 and 6 are double cuts.
Widen cuts.

Cut Depth Increments: .025

HPC 1200CMB
Code Card: XF4 or CF4
Cutter: CW-1011
Jaw: A
Gauge From: Shoulder

HPC Punch
PCH Card: PF4
Punch: PCH-1011
Jaw: A

HPC CodeMax
DSD #: 105
Cutter: CW-1011
Jaw: A

Framon
Cuts Start at: .100
Spacing: Use spacing block
VB2 only.
Block #: 2

Depth Increments: .024

Curtis

Cam-Set: VW-3
Carriage: VW-3C

A-1

Pack-A-Punch: PAK-90V

Silca

Unocode card No.: 50

ITL

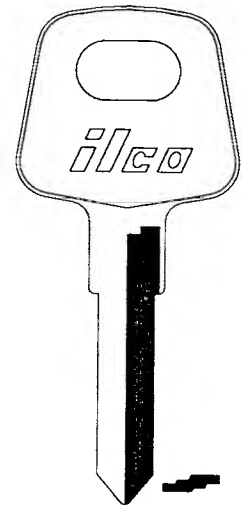
ITL Manufacturing ID: 357

Spacings:

1 - .100
2 - .195 - .240
3 - .334
4 - .437
5 - .548 - 594
6 - .705 - 751
7 - .870

Depths:

1 = .299
2 = .273
3 = .248
4 = .226

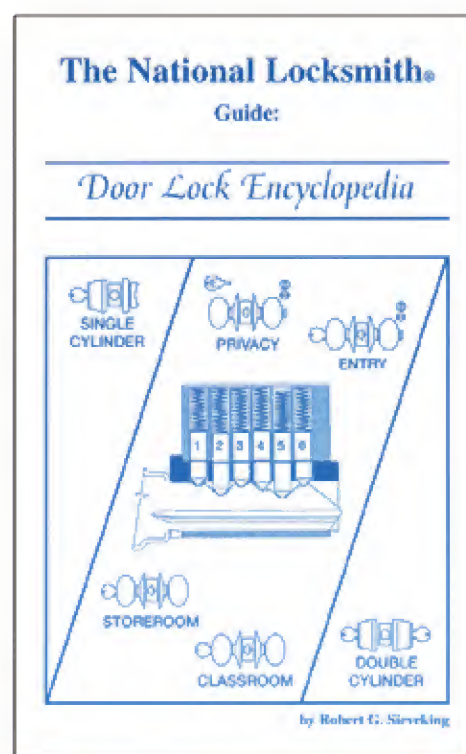


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| AH3 | 2112444 | AH34 | 1112244 | AH65 | 2122444 | AH96 | 3324413 | AH127 | 2134234 | AH158 | 2134334 |
| AH4 | 1122243 | AH35 | 3132144 | AH66 | 3132243 | AH97 | 2324213 | AH128 | 1134133 | AH159 | 1124234 |
| AH5 | 3112144 | AH36 | 2112143 | AH67 | 1132144 | AH98 | 1324414 | AH129 | 3134433 | AH160 | 2134233 |
| AH6 | 2132143 | AH37 | 1112343 | AH68 | 3112243 | AH99 | 3324414 | AH130 | 1134434 | AH161 | 1134333 |
| AH7 | 1132344 | AH38 | 3122243 | AH69 | 2122343 | AH100 | 1324113 | AH131 | 3124333 | AH162 | 2124434 |
| AH8 | 3112443 | AH39 | 2112144 | AH70 | 1132244 | AH101 | 2324114 | AH132 | 2124234 | AH163 | 3134233 |
| AH9 | 2132444 | AH40 | 1122344 | AH71 | 1132443 | AH102 | 2334313 | AH133 | 1124134 | AH164 | 1134134 |
| AH10 | 3122344 | AH41 | 3122443 | AH72 | 3132444 | AH103 | 2324413 | AH134 | 2124133 | AH165 | 2124333 |
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| AH14 | 3132443 | AH45 | 2112443 | AH76 | 1334314 | AH107 | 3324214 | AH138 | 3124134 | AH169 | 3431234 |
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Audi Series AH1-AH854

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| AH243 | 1123444 | AH300 | 2433213 | AH357 | 3311144 |

Door Lock Encyclopedia



The ability to remove a lock from a door, disassemble the mechanism, and remove the lock cylinder for service is not always a simple straightforward task.

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#DLE

Audi Series

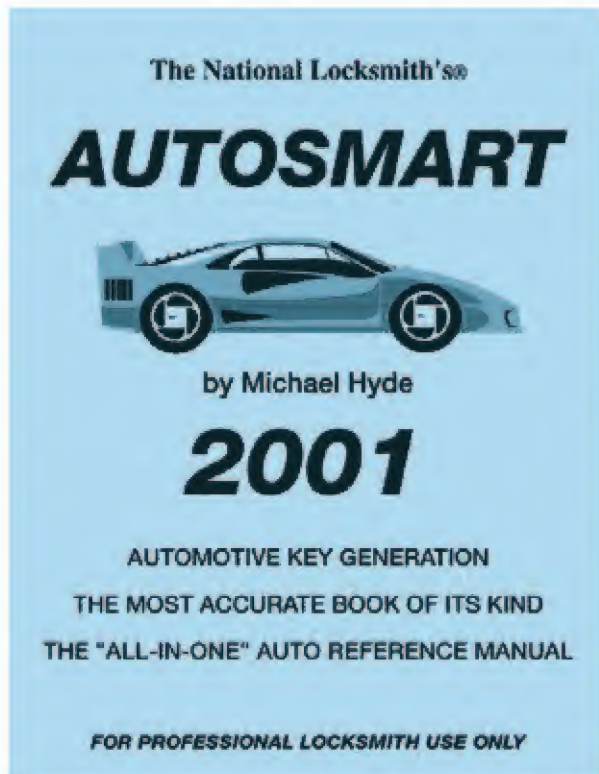
AH1-AH854

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| AH374 | 1321443 | AH431 | 3422313 | AH488 | 3234113 | AH545 | 3134423 | AH602 | 3421424 | AH659 | 1221444 |
| AH375 | 3331343 | AH432 | 2422214 | AH489 | 2224314 | AH546 | 1134424 | AH603 | 2421124 | AH660 | 3221444 |
| AH376 | 2331443 | AH433 | 2422113 | AH490 | 1224313 | AH547 | 3124323 | AH604 | 2431323 | AH661 | 2211443 |
| AH377 | 1311243 | AH434 | 3432313 | AH491 | 3224214 | AH548 | 2124224 | AH605 | 2421423 | AH662 | 1221143 |
| AH378 | 3311143 | AH435 | 2432413 | AH492 | 2234114 | AH549 | 1124124 | AH606 | 3431123 | AH663 | 3211343 |
| AH379 | 2311344 | AH436 | 3422114 | AH493 | 3224113 | AH550 | 2124123 | AH607 | 2421324 | AH664 | 2221144 |
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| AH384 | 3331344 | AH441 | 2422213 | AH498 | 2224414 | AH555 | 1134223 | AH612 | 2431223 | AH669 | 3231143 |
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| AH414 | 2331243 | AH471 | 1224413 | AH528 | 3421244 | AH585 | 3431224 | AH642 | 3211143 | AH699 | 3131443 |

Audi Series AH1-AH854

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| AH700 | 2111243 | AH726 | 2121144 | AH752 | 1134344 | AH778 | 1124343 | AH804 | 3431114 | AH830 | 2424214 |
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| AH725 | 3111343 | AH751 | 2134143 | AH777 | 2124344 | AH803 | 3431314 | AH829 | 3424313 | | |

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--- A DOZEN DONUTS ---



This is a simple advertisement and marketing tool that I use here on the Island of Nantucket, Massachusetts that generates thousands of dollars worth of business for my company each year.

I deliver to each real estate company in my business area at least one dozen donuts (four times a year). Every three months I special order 18 dozen donuts in a mixed assortment. After I receive these donuts, which are flown over to us on our local airline, (Nantucket Island is thirty miles at sea, off the coast of Massachusetts), I staple a business card to the front flap of each box of donuts and write a short thank-you note on the top of the box.

There are exactly nine real estate companies that sell over 89% of the homes here on Nantucket. Having a special treat like a donut from the

mainland means a lot to some people here because Nantucket Island does not allow any franchisees.

With each donut delivery I also include a "security update" and list the number of homes broken into here in the last three months (as identified in our local newspaper), and new home security needs now available on the market.

The cost of this small token of my appreciation to these local real estate companies is exactly \$72.00 which equals one standard service call trip charge \$45.00, and the labor involved to repin and install a lock. I am happy to provide this small service to my customers who in turn always call me when service is needed.

That is what I call a great advertisement and marketing investment. Think of how much it will

cost you, the local locksmith, who perhaps lives only a mile away from the local donut shop, to do the same for your local real estate companies. I also send donuts to the police department, fire department, and, believe it or not, the twenty-seven local cabs here on this little island every Christmas. After all, who brings the customer to his home when he comes in from a long flight from the mainland, after leaving his house keys in the parking lot on the other side of the ocean?

In selling ourselves to our customers we must be proactive in our marketing and advertising to our customer base. This simple sales strategy may not work for everyone, but I would venture to say to you, the local locksmith in a small rural community, or perhaps the suburb of a large city, you will do well to consider this marketing and advertising pitch to your customers. After all, you are really saying "thank you" for any past and, perhaps, future referral.

Some of us may not be able to compete with the local hardware store, Wal-Mart, or Home Depot in selling customer lock sets they install on their doors, their homes or their businesses. However, we can compete in service to the customer if they know who we are and how to contact us. Remember, in advertising and marketing, target those companies and individuals that can refer the customer to you. It works for me. **TNL**



by
Dale W. Libby, CMS

Darex Drill Sharpeners

The SP2500 Super Precision Drill Sharpener

Anyone, who has ever used a DAREX sharpening machine,

will be the first to tell you how great these precision instruments are. DAREX, of Ashland, Oregon manufactures several different

accurate sharpening machines for many types of tools, including: precision end mill sharpeners; precision tap; reamer; countersink sharpeners and a whole family of drill bit sharpeners.

I will talk about the SP2000 and the SP2500 Super Precision Drill Sharpeners. I have owned my DAREX sharpener for over 10 years and have had nothing but trouble free experiences with it.

For my unit (*the M4 in photograph 1*), I have both the regular chuck that holds 1/16-inch to 5/8-inch drills and the larger chuck that will accommodate 1/2-inch to 1-inch bits.

The common bond between the older units and the new units is that with little practice, it is easy to sharpen drills to the perfect drill bit geometry. Both units will accommodate drills of any length, from 6 to 60 inches or longer. The chuck holders are easy to use and hold the drills in perfect alignment with the sharpening wheels.

Photograph 2, is my older DAREX with the new SP2500 next to it on the right. As you can see, both are distinctly different from one another. Both units take up the same bench space, and both can be mounted to an optional stand for individual platform operation.

Before sharpening any drills, I always use a drill gauge on my dull bits. This accomplishes two operations that make the sharpening experience quick, easy, and painless. First, by using the gauge, you are sorting the drills by size. It is much easier to



1. My original M4 sharpener from DAREX.



2. Size comparison between the M4 and the SP2500 sharpener.



3. Drill chuck in Setting Fixture.



4. The two drill setting handles. Note the directions printed on the top of the machine. Squeeze the two handles together to set rotation and depth of drill in the chuck.

checking for burrs on the shank of the drill. These imperfections will stop the bit from going easily through the gauge. These burrs must be either filed or ground off before the bit can be put in the sharpening chuck and properly set.

The holding fixtures use parallel holding arms that grip the drills when in the chuck. When the drill is being 'set' the drill must rotate in the chuck freely. This is true in both the old and new drill holding fixtures. Once the drills

are de-burred, the sharpening will go off without a hitch.

sharpen many drills of the same size. Less chuck tightening between bits will amount in less time spent in adjusting each individual bit.

The real time saver, however, when sorting bits by using the drill gauge is you are

The two new drill sharpening machines; the SP2000 and the SP2500 use an electroplated Borozone sharpening wheel (CBN). These wheels can sharpen high-speed steel and cobalt drills. Special diamond wheels are available to sharpen carbide drills. The CBN wheels never need to be dressed or cleaned. They will wear out eventually, but their long

AutoEdge

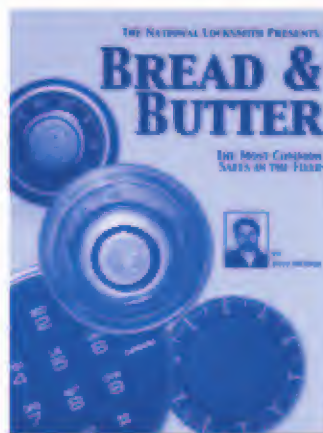


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#BB - 01



5. Once the drill is set, it is placed in the sharpening fixture and rotated clockwise to sharpen.

life is legend.

The difference between the SP2000 and the SP2500 is that the 2500 has a pivot tube for splitting the point of the drill after it has been precision sharpened. There is also another internal wheel (CBN, again) that is attached to the back of the regular wheel. This wheel is used for point splitting the drill only.

Photograph 3, shows one of three drill bit holding chuck fixtures in the 'setting' hole on the SP2500. Once the drill is properly set, the chuck is tightened in this fixture.

Setting the drill is a novel experience with the SP2000 and SP2500 sharpener. It is done by inserting the drill bit in the chuck, inserting the chuck into the fixture, and then squeezing the

red handles together. (See *photograph 4.*) There is an internal light in the machine that lets you view the setting of the drill.

When the handles are squeezed together, two flat paddles extend from inside the machine and contact the sides of the drill flutes. A plunger extends and rotates the drill bit into perfect alignment with reference to

twist and depth setting. The depth of grinding can be set by both a depth lever adjacent or the setting lever.

Once the drill is aligned in the fixture, the chuck is tightened and the whole unit is then inserted into the sharpening tube. (See *photograph 5.*) The unit is then turned a few times clockwise and the drill is perfectly sharpened. If the drill is not fully sharpened, just reset it again in the setting fixture, and the next time it will be perfectly sharpened.

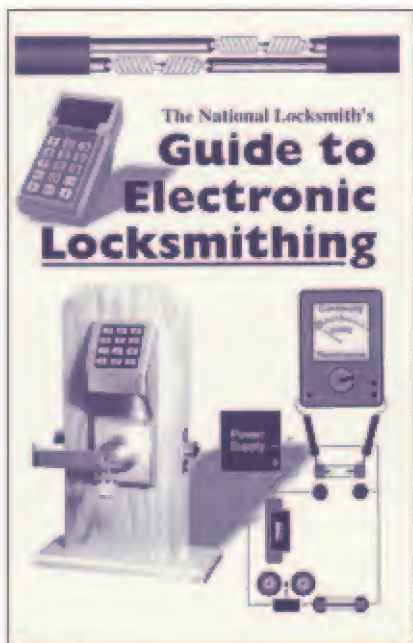
Another nice feature about this machine is that all the directions are printed on the top of the machine with appropriate diagrams and pictures. A more in depth understanding of the details of the machine can be gleaned by reading the detailed directions.

There are three chuck sizes included with both these machines to accommodate a very wide range of drills. They are:

1/16" to 1/4" 1.5mm - 6.3mm

1/4" to 5/8" 6.3mm - 16 mm

5/8" to 1" 16mm - 26mm



Electronic Locksmithing

Everyone knows there's big money in selling, installing and servicing electronic security such as mag locks, electronic strikes, and simple access control.

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#EL - 1



6. Magnetic chip and debris tray with adaptation for vacuum attachment.

This machine will sharpen 1/16-inch drills as easily as 1-inch drills. Many specialized adjustments are available for your machine and are explained in the well illustrated directions.

The difference between the SP2000 and the SP2500 is that the latter will split the point of the drill after it is sharpened.

Another nice feature on the machine is the included chip or debris

tray shown in *photograph 6*. There is a magnet in the bottom of the tray that traps the steel metal chips. The tray can be brushed clean or the black plastic plug in the end of the tray can be removed and an included vacuum tube attachment put in its place. Now, when you sharpen bits, a vacuum cleaner can be run to keep the tray and machine clean.

Both of these Darex machines offer a drill sharpening system that is better than anything I have ever used with perfect results. Every safeman needs a good drill bit sharpening tool, for nothing is nicer that sharp bits when drilling a safe.

Sharpen, open, and prosper!

For further information contact:

Darex Corp.

220 E. Hersey

Ashland, OR 97520

Phone: 800-547-0222 or

(541) 488-2224

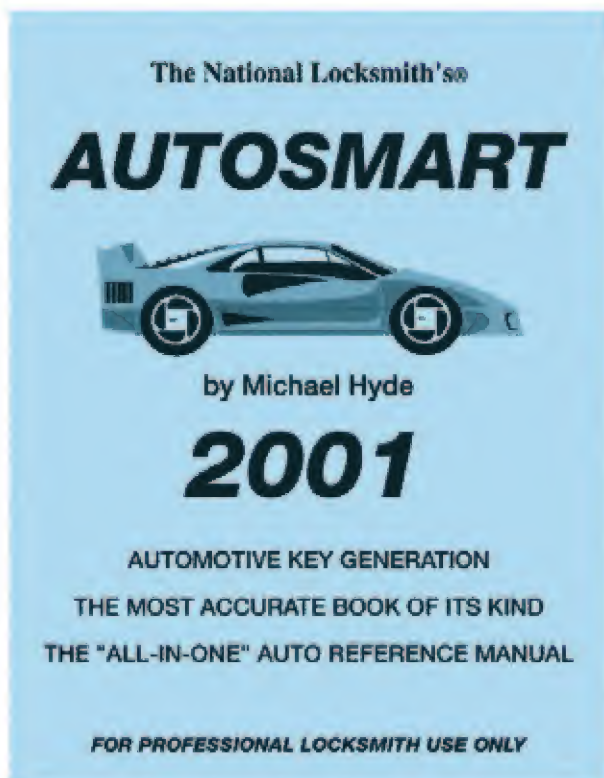
Fax: (541) 488-2229

E-mail: ANDERSON@DAREX.COM

Web: www.darex.com

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TEST DRIVE!

All of us know the headache of converting a standard cylindrical lockset mounting to a cylindrical lever lockset mounting with through-bolt mounting posts. Those through-bolt mounting posts are just outside of the 2-1/8" cylindrical crossbore making it very difficult to just freehand drill. The placement of the through-bolt holes is critical and rather precise.

There are several methods and tools available to precisely drill through-bolt holes after the main crossbore hole is drilled. Some tools require that you know the door thickness and then be clamped on the door and adjusted for backset before the holes can be drilled. Others need to be clamped through the crossbore hole before the through-bolt holes can be drilled. And then there are those that are little more than a flat plate with a couple through-bolt hole position indicators.

All the tool mentioned work, but each has it own unique drawback, whether it be the need to mount and adjust the tool before use or the lack of important features to make the tool more functional.

PRODUCT DESCRIPTION:

The Schwenk Co. has introduced The TimeSaver One, Two and Three, designed to install the Schlage, Corbin/Russwin, Sargent and Arrow lever lockset through-bolt mounting posts as well as the Alarm Lock Trilogy T2 and Ilco Unican locks. It eliminates the need to know the door backset or thickness, and is very easy to use and setup. In no time at all, a standard cylindrical lockset mounting can be converted to a lever lockset through-bolt mounting.

There are three TimeSaver's available. The TimeSaver One is used

The Timesaver by Schwenk Co.

to install the Schlage lever lockset. The TimeSaver Two is used to install the Alarm Lock Trilogy T2 and Ilco Unican. The TimeSaver Three is used to install the Corbin/Russwin, Sargent and arrow lever locksets.

FEATURES & CONSTRUCTION:

The TimeSaver is precision machined from aluminum and is available in three anodized finishes: red, blue or black. The unit is compact and lightweight, featuring scratch resistant rubber feet, hardened steel drill guides and a bubble level to assure accuracy.

INSTALLATION:

The TimeSaver is simple and easy to use. Mount the TimeSaver crossbore guide in the door and align the unit until the bubble level is centered. Once centered, drill both the top and bottom through-bolt holes and the task is finished. It doesn't get any easier than that.

PRICE:

The TimeSaver One, Two and Three has a retail price of: \$65.00. It comes with a lifetime warranty.

CRITIQUE:

When looking at the TimeSaver, the ruggedness of the bubble level would be an obvious cause for concern. While this is a very nice feature to assure the through-bolt holes are in a perfect vertical alignment, how long will it be before it's broken? As with most service tools, when finished they are "thrown" back in a toolbox or drawer containing other tools of destruction.



After speaking with the designer of the TimeSaver Gene Fridman, regarding this concern, he informed me that there is a design change on the new TimeSaver version featuring a protective guard, which covers the top of the bubble level. According to Fridman, even if the bubble level is broken it will be covered under the lifetime warranty and replaced.

CONCLUSION:

Aside from the TimeSaver's multiple manufacturers installation limitations, The TimeSaver is a very nice tool. It is well constructed, features everything you need and is easy to use.

For more information on the TimeSaver circle RR# 371, or contact:

Schwenk Tool Co.
60 N. Winchester Blvd. Ste. 4
Santa Clara, CA 95050
Phone: (408) 978-0403
Fax (408) 247-5397
E-mail: schwenk@flash.net 

IN SUMMARY:

DESCRIPTION: The TimeSaver is designed to simplify through-bolt installations.

COMMENTS: There are three TimeSavers available for: Schlage, Corbin/Russwin, Sargent, Arrow, Alarm Lock T2 and Ilco Unican.

PRICE: \$65.00

TEST DRIVE RESULTS: The TimeSaver is a very nice tool. It is well constructed, features everything you need and is easy to use.